

MANUFACTURERS' RECORD.

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Manufacturers' Record.

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BALTIMORE, APRIL 10, 1896.

New England Admits It.

This act of the Lawrence Company is a recognition of the conditions to which the Manufacturers' Record, of Baltimore, began to call attention ten years ago, but its predictions were regarded as the optimistic dreams of an enthusiastic Southern writer, when they were really the matured convictions of an observant and very conservative thinker, who made a continuous and careful study of the cost of manufacturing cotton goods. When Mr. Edmonds, editor of that paper, first predicted that the South would eventually be the centre of that industry and fix the prices for cotton goods for the world, he was ridiculed and pronounced a visionary. But time has proved that he was wiser than his critics, and that the changes he foretold will come much sooner than even he anticipated.—Worcester (Mass.) Spy.

Covers the Whole Country.

Every man in the South who wants to attract the attention of Northern and Western people should read the following, as a sample of many similar voluntary letters:

Morganton, N. C., March 23.
Southern States Magazine,
Manufacturers' Record Building,
Baltimore, Md.

Gentlemen—We enclose check to cover bill for advertising for three months. Our card in your magazine has brought inquiries from Tampa to Toronto and from Portland, Maine, to Portland, Oregon. Very truly,

THE MORGANTON LAND &
IMPROVEMENT CO.,
(Signed) W. C. ERVIN, Secretary.

Why not try the "Southern States" as an advertising medium? Published by Manufacturers' Record Publishing Co.

The Board of Trade of Baltimore, at its regular monthly meeting on Monday last, passed a resolution heartily approving the bill introduced by Hon. W. P. Frye, of the United States Senate, for the creation of a Department of Commerce and Manufactures. This proposed department, which the Manufacturers' Record suggested a few months ago, is commanding the most favorable consideration of the entire country.

The General Business Situation.

It is to be regretted that the commercial agencies find it necessary to report, as Bradstreet's does, that "the total number of business failures during the past quarter is so much larger than usual; in fact, so much larger than ever before in a corresponding period as to challenge attention, particularly when it is recalled that these reports exclude failures of those engaged in agricultural pursuits, in any of the professions, in transportation enterprises, or as employees in mercantile and industrial concerns, or of those engaged in purely personal service."

The total number of business failures in the United States during the past three months was 4512, or exactly 700 more than in the corresponding quarter of last year. The only preceding quarter in which the total number of failures was as large as 4000 was in 1885, immediately following the panic of 1884, when the total was 4050. In no one quarter before or since has the number of failures been as large as in the past three months, although in the first quarter of 1894 there were nearly 4000 failures reported, or 3969, compared with which the increase during the past quarter is about one-ninth. Commenting on these failures, Bradstreet's says:

"No corresponding period during the previous fifteen years has presented so large a total of liabilities as that, the statistics for which are now made public. In the first quarter of 1885, when there were 4050 failures, the total liabilities amounted to \$41,464,000, against \$62,513,000 for the past three months."

In the New England and Middle States there is comparatively slight change in the number of failures, the former showing 584, against 535 for the same time last year, and the latter 1030, against 910 last year. In the Western and Middle Western States, however, the increase is very marked. In the Western States the failures for the first three months of 1895 were 830, and for the corresponding period of this year 1205, the increase in liabilities having jumped from \$5,366,000 to \$16,905,000; while in the Northwestern States the number of failures increased from 344 to 475. The total increase in liabilities rose from \$46,910,000 during the first three months of 1895 to \$62,500,000 in 1896, showing an increase of \$15,600,000, of which \$11,600,000 was in the States of Ohio, Indiana, Illinois, Missouri, Michigan, Kansas, Kentucky and Colorado, all of which in Bradstreet's are classed under the general heading of Western States. Minnesota also showed an increase from \$748,000 to \$3,003,956; Nebraska, from \$488,500 to \$1,370,000; Montana, from \$89,000 to \$147,500, while Iowa exhibited a decrease, dropping from \$4,750,000 last year to \$505,000 this year. In the Middle States the total for the three months of last year was \$17,445,000, and for this year \$21,102,000, an increase of \$3,700,000.

As compared with these figures, the report for the South shows a phenomenal record of stability. The failures in that section for the first three months of 1895 were 800, and for the same period of this year 736, a decrease of sixty-four in number, while the total of liabilities in the South was \$8,173,000 this year, against \$7,639,000 last year, an increase of only \$500,000, against this vast increase of \$11,600,000 in the Central Western States, \$3,600,000 in the Middle States, and \$2,300,000 in the State of Minnesota alone. In other words, the one State of Minnesota showed an increase in liabilities of five times as much as the total increase of the entire South. In fact, the increase in liabilities in Montana of \$548,000 was greater than the increase in the thirteen Southern States. If the State of Texas be omitted (the liabilities in that having been very heavy by one unusually large failure), the South would show a heavy decrease in liabilities as compared with last year. In view of the criticism sometimes made by people who have not investigated the subject as to commercial credits in the South, it is worth while making a detailed comparison, taking these Western States and the Southern States. The report of the Western States in detail, as given by Bradstreet's, is as follows:

WESTERN STATES.

No. of failures.	Liabilities.
1895. 1895.	1895. 1895.
Ohio ... 254	\$4,565,000 \$1,651,905
Indiana ... 98	1,611,138 276,100
Illinois ... 247	4,853,649 1,121,880
Missouri ... 177	1,933,045 859,275
Mich. ... 104	1,206,338 709,651
Kansas ... 231	995,459 242,004
Kent'ky ... 89	1,645,160 410,342
Colo. ... 5	35,500 95,000
Wise. ... 109	857,800 1,123,800
Minn. ... 137	3,003,956 748,117
Iowa ... 101	505,329 4,750,152
Neb. ... 90	1,370,550 488,500
Mont'a ... 13	647,500 89,000

SOUTHERN STATES.

No. of failures.	Liabilities.
1895. 1895.	1895. 1895.
Mid. ... 45	\$666,400 \$274,900
Va. ... 83	936,224 927,211
W. Va. ... 11	47,828 50,534
N. C. ... 15	219,200 351,700
S. C. ... 14	121,100 241,100
Georgia ... 61	502,641 513,112
Florida ... 13	169,350 170,000
Ala. ... 32	196,770 387,899
Miss. ... 47	587,700 724,400
La. ... 61	548,480 1,428,246
Texas ... 258	3,044,850 1,378,553
Tenn. ... 45	303,238 672,500
Ark. ... 32	579,300 237,800
Dist. Col. ... 19	250,500 282,025

Bradstreet's, in commenting upon these figures, refers to "the even tenor of the commercial and industrial way pursued by the business community of New England this year as compared with last year, as shown by the slight variation in the number of failures," and adds: "Even more conspicuously steady and conservative business development is found in advices from the Southern States, which show only 736 business failures, compared with 800 in the same quarter one year ago. * * It is when we come to records from the Western and the Middle States that increases, not only in number of embarrassments, but in aggregates of indebt-

edness, becomes striking. The Western States, as given in the accompanying table, show an increase in the number of failures of more than 45 per cent., and an increase of more than 200 per cent. in liabilities."

Turning to the report of the bank clearings for March and for the three months, Bradstreet's says:

"The principal feature of the March exhibit is the marked irregularity in returns from different sections of the country. For instance, by far the best showing and the largest number of increases are reported from the South. * * * The Southwest and the New England States, on the other hand, make the poorest returns." The detailed reports by groups of clearing-house returns during March and for the first quarter of 1896, as compared with the same periods of 1895, were as follows:

Groups.	March, 1896.	of March, '95.
New England.	Decrease 1.5	Increase 2.2
Middle	Increase 3	Increase 10.8
Western	Increase 4	Increase 2.8
Northwestern	Increase .2	Increase 4
Southwestern	Decrease 4	Increase .5
Southern	Increase 11.9	Increase 14.6
Far Western	Increase 1.1	Increase 7.2

The heaviest gain reported for March was 11.9 in the South, or nearly three times the percentage of gain in the next highest section—the Western States; while New England exhibited a decrease of 1.5 per cent. For the three months the gain in the South was 14.6 per cent. against an increase of only 2.8 per cent. in the Western States and an increase of 8.4 per cent. for the entire country.

Can the South Export Iron?

Mr. J. Bowron, treasurer of the Tennessee Coal, Iron & Railroad Co., in a letter to the Manufacturers' Record as to the possibility of exporting pig iron, says:

There are no large sales of Alabama iron likely to be made in England, for although we can, at our lowest record of prices, put iron in certain ports a little below the parity of English quotations, it would manifestly not be a profitable business to attempt to cultivate—it would not pay for the trouble. There is just about room at today's prices for Alabama iron to scrape in and make a reasonable profit at such points as Genoa, Barcelona, Hamburg and Bremen, and, perhaps, Havre and Lisbon, and there certainly would be not only a fair, but a good return on shipments to such points as Tokio and Melbourne if we had control of the tonnage. It is in this respect that the English system of subsidized mail steamers gives a great advantage to English commerce and industry, as it opens the way for certain shipment at stated schedules and reasonable freights to every important market. There is not quite the same room for export of Alabama iron that there was a year ago, because prices are not quite so low as they were then. It is a question, however, whether a combined effort, if made by several of the Southern companies, might not be successful. There is some idle plant in the South which might be put to work cheaply, reducing the fixed charges of those stacks which are running, and if such additional business were put in at cost price and the iron contributed ratably by a number of companies, there might be a large quantity of it delivered at competitive foreign ports at prices that would undoubtedly go below the ability of our English friends to meet.

The Value of Port Royal's Dry Dock.

The Forty-fifth Congress appropriated for the fiscal year ending June 30, 1881, about \$14,000,000 for the maintenance of the naval department. By reason of the laudable efforts to rehabilitate the American navy, there has been a progressive increase of appropriations for the support of the naval service. In general, it may be stated that there has been a progressive increase of about \$1,000,000 a year in the annual appropriation.

The vessels which have been authorized during the past fifteen years will cost over \$110,000,000. The present Congress will undoubtedly authorize at this session the building of at least \$25,000,000 worth of ships.

Public sentiment will undoubtedly sanction the enlargement of our navy, so that the minimum estimate of the value of the ships we must have in readiness cannot be less than \$150,000,000.

It is a conservative opinion which allows 5 per cent. for the depreciation of the vessels. As America does not possess a series of coaling stations and dock-yards throughout the world, we must allow at least 5 per cent. more for repairs. The various deficiency bills, which have been passed to permit extra repairs, will show that it will require an expenditure of at least 5 per cent. of their value to keep the ships in good condition.

At least 10 per cent. of the value of a defense fleet, or an expenditure of \$15,000,000, must be made annually to maintain in efficiency the naval strength which is a necessity. There is not the slightest doubt but that at least \$15,000,000 more will be required annually to pay officers and men, to sustain the navy-yards, and make appropriations for the numerous auxiliaries connected with the naval establishment.

The country must be prepared hereafter to appropriate at least \$30,000,000 each year simply for maintaining our present naval strength, and for providing for the needs of the material and personnel. This will only permit the building of ships to replace those condemned or lost, but will make no provision for an increase in our naval strength.

Anything which will tend to change the percentage allowed for depreciation and repair vitally concerns the efficiency of the naval service and the defense of the country.

The question of docks is, therefore, of importance. The deterioration of steel ships proceeds much more rapidly than when the vessels were constructed of iron, and the neglect to dock vessels at intervals, and thus to prevent corrosion, will have a very important effect upon the life of the hulls.

On the Pacific coast of America an enemy can only operate against us from the north, and the cost of such operations would be fabulous. We must, therefore, be prepared to resist an enemy operating against our Atlantic coast. It requires no strategist to understand that our opponents would either operate from Halifax or from some point in the West Indies as a base of supply. In all probability, the attack would be made from Halifax, but if the South Atlantic States did not contain everything necessary for the home fleet, the enemy would work from a West India port. With one exception, however, every possible antagonist would be compelled to work from a base situated in the West Indies.

If provision must be made for receiving an enemy operating from the south, then there is only one base of operations which in time of emergency we could think of using as a rendezvous for the fleet. That point is Port Royal sound. Within twenty-four hours of the naval station of that Carolina harbor are the coalfields of East Tennessee, Southwestern Virginia and Northern Alabama. The anchorage of Port Royal sound is really a sheltered arm of the sea, and for miles the channel to the ocean is almost straight. It is over fifteen miles from the sea buoy to the dock, and a vessel would have to change her course but a few times throughout this great length of channel.

It must be remembered that the convoys, tenders, colliers, scouts and other auxiliary vessels used in connection with a fleet of warships will run up into the hundreds, and that the only anchorage for such a flotilla south of Cape Hatteras is found in Port Royal sound.

Within a day's ride of that harbor are nearly all the progressive manufacturing towns of the South—Richmond, Roanoke, Charlotte, Columbia, Raleigh, Charleston, Augusta, Savannah, Rome, Chattanooga and Atlanta. Within a few hours' reach are some of the best truck garden regions of the world, and this question of subsistence is an important military subject for consideration. The waters of the sound contain an inexhaustible supply of fish. An unlimited supply of unskilled labor for coaling the ships is within easy access.

The limits of this article will not permit a discussion of future naval operations along our Atlantic coast, but we might as well conjure the possibility of a great decisive naval battle being fought on the lakes as providing for the contingency of our naval forces meeting their opponent within the Gulf of Mexico.

To the eastward of the Bahamas, or within a few hours' steaming of Port Royal sound, we shall meet the enemy. It is, therefore, imperative that there should be constructed without delay, on Port Royal sound, a series of docks, the construction of the necessary repair shops, and the erection of coast defenses which will effectually guard the entrance of this magnificent sheet of water.

This is a matter which concerns the entire country, but particularly a belt of Southern States, and it should not be left for the South Carolina delegation to carry on this labor alone. That Senator Tillman will take hold of this matter is a certainty, but he can best promote the work by waiting until he has thoroughly posted himself in regard to this maritime and military matter.

There have been provoking delays in the completion of the Port Royal dock. The negligence on the part of some government officials to clear the channels and to construct necessary machine shops is inexcusable. Millions of dollars have been spent in improving the entrance to the harbor of New York, and a joint resolution has just been passed authorizing the expenditure of money to clear the channel leading to the Norfolk navy-yard. Large sums have been expended in improving every great harbor of the country, and the fact that some money is needed for the same purpose at Port Royal ought not to occasion surprise.

A careful analysis of the various disadvantages charged against the dry-dock on Port Royal sound invariably shows some blunder or negligence con-

nected with a government official. There are countless spots on the shores of this protected harbor where a dock could be suitably located, and if the best site has not already been chosen, then the fault must be laid to the officials who selected the present situation.

If the contractor who built the dock was incompetent for the task, then the fault must also be assumed by the officials who awarded the contract, for it was within the power of some one to reject the bid of anyone not able to undertake the work.

It has been asserted that the sill of the Port Royal dock should have been placed lower. This adds another to the blunders committed by some one in Washington if the allegation is true.

The official report of the commandant of the Port Royal station has been given to the press, and it is asserted that "the docking of the Indiana has caused no displacement or settling of the structure whatever. The leakage is normal, the drainage pump controlling it perfectly by running at intervals. The caisson is a very tight fit, and the dock fulfills the purpose for which it was constructed." It is the only dock in the country that can receive today the largest of our battleships.

It is the imperative duty of Senator Tillman, who is a member of the Senate naval committee, and of Representative Tate, of Georgia, who is a member of the House naval committee, to give special study to the question of docks at Port Royal. There is not a single enterprising private firm in the world which does not realize the necessity of building docks in pairs. Alongside of every large dock should be a small one for the reception of smaller craft. Torpedo boats and tugs are constantly in need of docking, for the duty which they perform exposes their propellers to impairment, and thus necessitates repeated docking. Without delay a small dock must be constructed, for the modern battleship requires a fleet of tenders of various descriptions, in order that her maximum efficiency may be secured.

The rehabilitation of the navy has now reached such a state that there might soon justly be a temporary lull in the building of ships, and attention be given to the construction of docks. We must provide for the contingency of meeting an opposing fleet in the West Indies, and Port Royal sound must be placed in condition to be used as a base of operations. The building of a great stone dock, which will easily take in a battleship of 15,000 tons, must be commenced. This matter has only to be referred to a board of military experts to have urgent recommendations made to secure the building of several docks at this point.

The attempt to belittle Port Royal is the work of people who are injuring themselves and their interests by such action. It is a remarkable fact that nearly every newspaper in the country which opposed the construction of the Kearsarge and Kentucky by the Newport News Company is now sneering at the usefulness of the Port Royal dry-dock.

As a matter of economy, the government should build without delay a series of docks at Port Royal, and supplement these structures with construction and machine shops fitted with the necessary tools to effect repairs of any nature. It would not be necessary then for the North Atlantic fleet to come north of Cape Hatteras, except when some sanitary reason made it necessary for one of the vessels to steam to colder latitudes.

This subject is an important one, and is worthy the careful study of the ablest men of the South who are now in public life. The men who will give this subject study and attention can do a great work for the South and for the country. The construction of a great plant at Port Royal will be a great stimulus to the prosperity of the South, but its greatest usefulness will be found in providing for time of war a great naval station at one of the best harbors in the world.

The nation has in Port Royal sound a harbor of inestimable military importance. Its situation with respect to the islands of the West Indies and the manufacturing resources of the South makes it, par excellence, the ideal spot for conducting military and naval operations.

Coal Mined in Alabama.

The output of coal in Alabama in 1895 was the largest on record, having been 5,705,713 tons, as compared with 5,274,000 tons in 1892, which was the largest previous output. The report of the State mine inspector, Mr. James D. Hillhouse, shows that during 1895 there were eighty mines in operation, the total number of hands employed having been 9766. The production of coke for the year was 1,600,798 tons, turned out of 4515 coke ovens.

The production of recent years in Alabama has been as follows:

Years.	Coal.	Coke.
1890.....	4,090,400
1891.....	4,759,781
1892.....	5,274,000
1893.....	5,170,045	1,218,791
1894.....	4,381,395	924,292
1895.....	5,705,713	1,600,798

This shows an increase as compared with 1894 of 1,320,000 tons of coal and nearly 700,000 tons of coke.

The Projected Steel Plant at Birmingham.

The plans for the building of a steel plant at Birmingham, as projected by the Tennessee Coal, Iron & Railroad Co., are reported to be on the basis of a subscription on the part of the New York stockholders to \$500,000 of bonds for a steel plant, provided \$300,000 more can be placed, leaving \$200,000 in the treasury. It is stated that the Southern Railway Co. and the Louisville & Nashville Railway Co. have each agreed to take \$100,000, leaving a balance of \$100,000 to be raised in Birmingham, and this amount, it is reported, has been secured.

In view of the many efforts which have been made during the last few years to secure the building of a steel plant in Birmingham, the public will necessarily be somewhat skeptical until every detail is completed and the actual work of construction undertaken.

The Manufacturers' Record is satisfied that out of some of these efforts, possibly out of this particular one, will come the building of a great steel plant in Birmingham, which will mark a turning point in the whole history of the industrial progress of the Central South.

Labor Organizers Not Needed.

Eugene V. Debs, the labor agitator, has recently been making addresses in the South. So far as known, his influence has amounted to but little, except at Columbus, Ga., where it is asserted that the present difficulty with the employes at the Eagle and Phoenix Mills was partly due to his inflammatory speeches.

In no other part of the country are

the relations of capital and labor so harmonious as in the South. Thus far, strikes or similar occurrences have been very infrequent. The cotton-mill companies and other manufacturers have provided comfortable and pleasant homes for their hands, and as most of the factories are located in suburbs or in small towns, the hardship and suffering which have attended life in the crowded New England factory tenements have not been the lot of the Southern operatives. The South needs no labor agitators. Such men as Debs are a very undesirable class of visitors, and public sentiment should discourage their work in this section, where there is no necessity and no reason for labor organizations or "walking delegates."

The Will and the Way.

Out in Northern Minnesota is a farmer by the name of Hines, who has not much money, but is rich in ideas, pluck and energy, and these are in a fair way to do more for the people of his section than any capitalists have ever done or will attempt to do. Because of what he has already accomplished and of the outlook for his complete success in the early future, the Manufacturers' Record briefs the story for the benefit of its thousands of Southern readers who need to have something done for the betterment of their own localities, but are handicapped by lack of capital and by their inability to persuade those who have it to embark in the enterprise they wish to have undertaken.

In a certain part of North Dakota and the country east of it in Minnesota, extending to Duluth, is one of the most prolific wheat regions of the Northwest. The natural outlet for this product is Duluth, but the railroads now running through parts of that territory all have their terminals at Minneapolis. Other parts of it have no railroad facilities, and the farmers are compelled to haul their products long distances and then to pay what they consider exorbitant rates for railroad carriage to market. This man Hines suffered with his neighbors from these conditions, but, being a brainy man, he put on his thinking cap and kept it on until he had solved the problem to his own satisfaction. The conclusion which he reached was this, that from the North Dakota section to Duluth a railroad could be built that would save to most of the farmers many miles of wagon transportation and quite a long distance of railroad haul as well. If the farmers along that line were to build that road, they could easily make a contract with someone to equip and run it on terms that would be favorable to the farmers and that would pay a reasonable profit on their investment to the contracting operators.

Having reached this conclusion, Mr. Hines sought out the most intelligent farmers along the proposed line and laid his plans before them. He secured their hearty co-operation, and then applied to the legislatures of North Dakota and Minnesota and obtained a charter for the Duluth & North Dakota Railroad. The capitalists interested in other roads regarded the scheme as so chimerical that they did not seriously oppose the measure, although some of their newspaper organs indulged in sundry sarcasms about "Hines's folly." But this plain, sensible farmer did not mind their sarcasms. He knew that he laughs best who laughs last, and he kept on with his plans, saying nothing, but working as industriously as a beaver. He and his farmer friends had

the route surveyed and staked. The people in every township were educated at schoolhouse meetings to the value of the scheme, and induced to give their spare time to the work of grading. When this had been done he organized volunteer associations for cutting all the ties needed and hauling them to points beside the projected road. This thing began to look like business. The Duluth merchants saw that the scheme was well planned, and, if carried out, would give them a large trade that had helped to enrich the merchants of St. Paul and Minneapolis. So they raised a small sum to help Hines over some of the rough places and enable him to go ahead.

The latest about this enterprise we find recorded in the Duluth Commonwealth. It says a stockholders' meeting has been called to take action on a proposition to take certain territory that had been omitted from the original scheme. We omitted to say that most of the stockholders are the farmers, who have paid or are paying for their stock with their labor, and that their wages are lower per day than the street-sweepers of our large cities would be willing to accept. Furthermore, the Commonwealth says:

Some heavy contractors have made a proposition that they will build the road through the timbered region to the Red River valley and furnish the material, supplies and everything else required to construct the line, providing the farmers of North Dakota will agree to settle with them when the road is completed—not later than next fall. Hines says the farmers can easily do this, and that they probably will, for if they will take stock to the amount of one \$100 share for each quarter section and pay 20 per cent. down, as he plans, or give their notes for that amount, it will put the road in the best financial standing of any corporation of the kind in the country, and it would undoubtedly be the best investment they ever made.

Hines thinks that every farmer along the line in North Dakota would have subscribed for stock long ago had they understood how easy it is to build and equip the road with what money each would put in. He says as soon as they understand this and that freight rates will certainly be reduced, they will come in droves to offer the assistance required.

Many towns in the South have already built cotton mills and successfully established other industries without the aid of great capitalists, by acting on the principle of the ancient Scotch proverb, that "many a mickle makes a muckle." Possibly this story of what Farmer Hines has done and is doing may contain a valuable point for the people of Southern agricultural districts, who need many things that they have not, but that are possible of attainment under the rule that "where there's a will there's a way."

Mr. Russell Howland, of London, who has recently been investigating the gold-ore regions of Georgia, in an interview in the Atlanta Constitution, makes some enthusiastic predictions in regard to the probability of gold mining in that State. Mr. Howland's statements read as though somewhat extravagant. He says:

I predict that Georgia will see within the next three years the greatest mining fever the world has ever witnessed. This State has the richest goldfield known on the face of the globe today. There are mines in North Georgia which are capable of producing \$40,000,000 of gold a year. Georgia is destined to be the richest mining State in America.

Mr. Howland claims to be an expert, representing English capitalists, and to have made a careful study of Georgia's goldfields. While the Manufacturers' Record believes that the South will become a leading gold-producing region, it is rather skeptical

about the entire fulfillment of Mr. Howland's predictions during the next three years.

Mr. H. W. Remington, of Remington, Wis., in a letter to the "Southern States," says:

I have received a couple of copies of your magazine, and have been much interested in reading them. I have passed them round among my neighbors for perusal. Quite a number of my neighbors have gone South already on the strength of information gained through your magazine, and two families more are getting ready to move to Alabama.

This is but one of many illustrations of the work which the "Southern States" magazine is doing. It will pay you to advertise in it. Published by Manufacturers' Record Publishing Co.

The Manufacturers' Record's New Orleans Edition.

(New Orleans Lumber Trade Journal.)

Another instance of the wide attention which the port of New Orleans has attracted since free wharfage has been agitated, and is already a fact at Port Chalmette and Southport, is the special work now in progress under the auspices of the Manufacturers' Record, of Baltimore, touching the future possibilities of this port. This journal, widely and favorably known as an exponent of Southern progress and development, is at this time preparing some elaborate descriptive work along these lines, to be issued in a large special edition, and two of the most experienced men on its editorial staff will spend several weeks in New Orleans collecting data for the work. The special issue will appear in the month of May.

The Manufacturers' Record is recognized in financial, industrial and commercial circles as the exponent of Southern progress and development from Maryland to Texas. From its point of view New Orleans should be to the Southwest what New York is to the East, what Chicago is to the Northwest, and what San Francisco is to the Pacific slope.

In the Manufacturers' Record's announcement, Mr. Thos. P. Grasty, who is in charge of this New Orleans work, says: "The new developments at New Orleans to facilitate commerce have a wider significance than many of our own people quite realize. They constitute the fulcrum of a lever which can be made infinitely more potent in hastening the day of Southern industrial and commercial prosperity than any instrumentality heretofore available.

The first step toward utilizing this tremendous new resource is to make the entire commercial world acquainted with its significance. The primary object of this publication will be to focus public attention on the following points:

1. The magnificent new wharf facilities for handling imports and exports.

2. The assurance of a reduction of port charges here to lower figures than prevail at any great maritime centre in the world.

3. The increase in railway facilities and the improved connections which make New Orleans second only to New York as a distributing centre.

As corollaries to the foregoing are the following features, which an increase of commerce will naturally make matters of interest to capitalists and men of enterprise:

1. The resources, timber, mineral and agricultural, of the empire of which New Orleans is the commercial capital.

2. How these resources may be profitably utilized.

In other words, a description in detail of the new and improved commercial facilities will cause a new and livelier interest to attach to money-making opportuni-

ties, whether in factories, colonization enterprises or general investments.

The support given the publishers of this exhaustive review of the situation at New Orleans will necessarily be from sources capable of considering the material interests of New Orleans from a higher point of view than one of direct personal profit; from individuals, firms and corporations capable of seeing indirect as well as immediate benefits, capable of appreciating a dignified, conservative, logical presentation of the conditions which underlie all progress, all prosperity.

The Illinois Central Railroad has subscribed for 10,000 copies of this edition, which will be sent to foreign shipping houses and leading mercantile establishments throughout the commercial world.

As stated editorially in the last issue of the Journal, this subject of the future of the gulf ports deserves the most careful attention by every one interested in the South's progress, and any extensive circulation of the advantages of Southern ports from so high class a journal as the Manufacturers' Record receives our cordial endorsement and support.

HOW TOBACCO PAYS.

Remarkable Growth of This Industry in North Carolina.

The remarkable increase in the production of tobacco in North Carolina is the reason for the publication of what might be termed a special "Tobacco" edition of the Raleigh News and Observer. Some time ago this enterprising journal devoted an issue to the cotton industry of the State, which was carefully compiled and prepared, forming an exhaustive treatise on the subject. As might be expected, the tobacco edition is extremely creditable to the publishers, and contains much information that is new relative to the production of this article. Prominent manufacturers and growers contribute articles over their own signatures on the success attained in various sections, while the editors of the leading papers in the tobacco centres have prepared interesting descriptions of the effect of the industry on the growth of the various communities. Illustrations of growers, dealers and manufacturers of some of the extensive factories and warehouses, also of buildings in the "tobacco towns," add to the interest of the publication.

The claim is made for North Carolina that its fine tobacco brings the highest price of any grown in this country. It is a fact that over \$1 per pound is often realized at sales, and that this year a lot of 101 pounds grown near Roxboro, in Person county, sold for \$101, or \$1 per pound. The total value of the tobacco crop to planters is now estimated at \$7,000,000, not including any of the amount realized from it as a manufactured product.

Tobacco has always been a staple product of North Carolina soil, where it was planted in colonial days, but the range of cultivation has been widely extended within a few years, as is indicated by the large increase in the number of markets for the planter. It is now grown in forty-five counties, representing an area of over one-half of the State. According to an expert estimate, nine of these counties, located in the mountainous district, produce 10,000,000 pounds, much of which is bright tobacco, and obtain an average of fourteen cents per pound. The Piedmont section of sixteen counties yields 34,000,000 pounds, averaging seventeen cents per pound and including all grades. In the eastern section the cultivated area has been greatly enlarged recently, and its production now aggregates

fully 41,000,000 pounds, selling for an average of thirteen and one-half cents per pound in the twenty counties. This gives an estimated total of 85,000,000 pounds, valued at nearly \$13,000,000. The principal sales points include Asheville, Durham, Greensboro, Germanton, Henderson, High Point, Hillsboro, Leaksville, Louisburg, Madison, Milton, Mount Airy, Roxboro, Salisbury, Statesville, Walnut Cove, Warrenton, Wilson, Winston, Tarboro, Rocky Mount, Greenville, Goldsboro, Kinston and Nashville.

With such an output from the soil of the State, it is but natural that capitalists should have taken advantage of the great opportunity to build factories at home, and they have done so. In fact, the growth of the manufacturing industry has been truly wonderful. It has been to many of the North Carolina towns what cotton mills have been to many a Southern village—it has built them up, increased their population and business and developed many of them into cities. Durham, Winston, Rocky Mount, Greensboro and Salisbury, some of the most progressive communities in the South, owe much of their prosperity to this industry. The great tobacco factories at Durham have given it a reputation throughout the world. In 1872 it had 250 population. Today it has 12,000. So great is the consumption and sale of tobacco in this market that only one-fourth of the 15,700,000 pounds received here per annum is brought in wagons to market, the rest being shipped here by railroads, which make every other tobacco market in North Carolina tributary to Durham. Two factories alone consume in manufacture 12,000,000 pounds of leaf tobacco per annum, Blackwell's Durham Company and W. Duke, Sons & Co. The following statistics will give an idea of its importance as a manufacturing centre, principally due to the tobacco industry:

Manufactories in 1869.....	12
Manufactories in 1880.....	16
Manufactories in 1890.....	23
Capital invested, 1870.....	\$25,000
Capital invested, 1885.....	\$2,170,000
Capital invested, 1890.....	\$4,000,000
Operatives employed, 1869.....	100
Operatives employed, 1880.....	500
Operatives employed, 1890.....	2,541
Wages paid in 1890.....	\$368,200
Advertising in 1890.....	\$814,000

The figures for 1895, using the best estimates, are:

Capital invested.....	\$5,000,000
Operatives employed.....	4,000
Manufactories	40
Wages paid.....	\$100,000

Durham has expended \$500,000 in hotels, churches, school buildings, hospitals and residences. In 1893 Col. Julian R. Carr built the Hotel Carolina at a cost of \$85,000. In 1895 Mr. Geo. W. Watts built and completed the Watts Hospital at a cost of \$50,000. Trinity Methodist Church was enlarged, remodelled and beautified in 1893 at a cost of about \$50,000. The First Baptist Church has been remodelled at a cost of about \$15,000. More than \$200,000 has been spent as a site and for the buildings at Trinity College; \$20,000 expended in the new Presbyterian church which was completed about 1890; \$40,000 for the First National Bank of Durham. Its list of factories includes the Erwin Cotton Mills, 25,000 spindles; the Pearl Cotton Mills, 10,000 spindles; Commonwealth Mills, Golden Belt Hosiery Mills, Mallory Cheroo Co. (capacity 7,500,000 cigars annually), Durham Fertilizer Co., Golden Belt Bag Co., Durham Cotton Mills and the great factories of Duke and Blackwell. The present plant of W. Duke, Sons & Co. is five stories high, built of brick, and has over four acres of floor space. It has a capacity of 3,000,000

cigarettes and 10,000 pounds of tobacco daily. It employs 800 people, and its business aggregates \$4,000,000 yearly. The plant of the Blackwell Durham Tobacco Co. embraces thirteen acres, upon which are built one main building four stories high, and two five-story wings. It employs 500 hands, and annually puts out 3,500,000 pounds of smoking tobacco.

Winston is one of the largest plug-tobacco-making centres in the world. In 1895 it produced over 12,000,000 pounds. It is the location of several large factories, and with the adjacent town, Salem, it has a population of about 20,000. The books of the collector of internal revenue for its district show the number of factories engaged in the manufacture of tobacco in plug, twist, smoking, cigars, cheroots and cigarettes is forty-seven. The sum for wages paid in Winston-Salem in one year is \$897,258.98.

Of the leaf tobacco grown throughout the country surrounding Winston-Salem for ten years preceding the year 1894, 110,000,000 pounds were sold in the warehouses of Winston for \$11,800,000, making an annual average of 11,000,000 pounds for \$1,100,000, the maximum number of pounds in one year being 16,000,000 pounds, which sold for \$1,900,000. During the ten years preceding the year 1894, there were manufactured in Winston-Salem 69,000,000 pounds of chewing and smoking tobacco, and its market value was \$23,000,000, the maximum number of pounds in one year being 11,000,000 pounds of the value of \$3,600,000.

The oldest factory in the city was opened as late as 1873 by T. L. Vaughn, who is still at the head of the firm, which has developed a trade extending all over the United States. One of the plants which has aided greatly to give the city its importance is that of Brown & Williamson, whose works occupy a five-story brick building 145 feet long, in addition to a storage warehouse nearly as large. One of the most extensive factories is that of P. H. Hanes & Co., who are among the most important makers of plug tobacco in the world. Their buildings range seven stories to one story in height, and they give employment to 600 people. The plant of the R. J. Reynolds Tobacco Co. consists of seven buildings, giving a floor area of about 250,000 feet. It employs nearly 1000 hands, and is increasing its output at the rate of nearly 750,000 pounds yearly.

The large amount of money placed in circulation by the tobacco industry alone has benefitted Winston in a variety of ways. It has well-paved streets, electric lights and street-car service, an excellent public-school system and several of the handsomest church edifices in the South. It is now constructing an imposing courthouse building, and has recently completed a hospital.

We might refer to the prosperity of Rocky Mount, Salisbury and other towns in the State, due in a great measure to the manufacture of tobacco, but Durham and Winston are striking examples of how manufacturing pays in the South, not only in tobacco, but in other branches as well.

The recent announcements that Southern iron companies have formed a combination for selling their product is somewhat premature, as the plans have not been fully matured. The object of the companies proposing such an arrangement as this is to bring about economy by dispensing with the present system of sending three or four traveling men to wait upon every customer and combine all the sales business through one agency.

BETTER OUTLOOK IN SUGAR.

Improvements in Louisiana Sugar Mills.

[Special Cor. Manufacturers' Record.]
New Orleans, La., March 21.

The prospects for an industrial development of considerable magnitude in the sugar district of Louisiana this season are fair. This development will not, however, be of a very palpable character to the casual observer, as it will consist principally of the substitution of new mills, new vacuum pans, evaporators and other apparatus for those now in use, and will not, except in some few cases, take the form of entirely new sugar factories. While it is yet somewhat early to prognosticate with much precision the improvements to be effected, the sugar-planter being proverbially slow and apt to delay the signing of contracts for new machinery to the last minute, yet that the additional machinery installed will be more than in a normal year is already fully apparent. The vice-president of one of the largest mill-supply houses in this section, a concern which makes a specialty of sugar-house material and the construction of bagasse burners, stated to the writer of this article last month that he already had more business in sight than he had been able to secure all last season up to the inauguration of grinding, and the reason of this condition of affairs is easily found. Last year hardly a planter in the State felt sufficient faith in the industry to put another dollar in it, even supposing he had the dollar, which in the majority of instances was not the case. A sugar-house, owing to its nature and to the fact that it must of necessity be idle three-fourths of the year, requires every season a thorough overhauling, otherwise the apparatus, through disuse, and through the rapid birth of improvements of all kinds, will become out of repair and out of date. It is therefore found in the majority of cases this season, that the repairs, additions and new equipment that should have been attended to last year, but were postponed through stress of evil circumstances, are now imperative. They must be made if the business shall go on. The financial ability to look after these matters properly has fortunately been secured by the relatively high price for which the sugar of the crop just ended has sold and is selling, and while another year or so may see a return to the ruinous prices of 1894 and 1895, owing to the persistence with which the European governments foster their sugar industry with enormous bounties, yet the sugar-planters see plainly that the better their apparatus and general plantation equipment the better they will be able to stem the tide of adversity, and just as they sunk their bounty money in improvements to field and factory, so they are spending with a lavish hand the little profits of the last crop on the betterment of their establishments. Last year there were one or two new plants constructed, even in the face of the adverse conditions then prevalent. The largest of these was constructed by a company having at its head Mr. M. R. Spelman, general agent of the Illinois Central Railroad at New Orleans, and president of the Pontchartrain levee district. It is known as the Gramercy Central Factory, and is one of the best-equipped establishments in the State, one of its most interesting features being the apparatus for handling cane in the caneshed and feeding the carrier, made by the Link Belt Machinery Co. of Chicago. Some 1500 tons of cane per day can be handled by this outfit at Gramercy, and at a remarkably low cost. Another sugar-house erected last season was the extensive factory of Mr. J. H. Meeker in Rapides parish, though it can

hardly be classed as strictly a new enterprise, as it replaced an old sugar-house of Mr. Meeker's which was destroyed by fire. A large number of cane-growers, small farmers of humble means, were dependent on this house for a market for their cane, and it was with the greatest satisfaction that they saw it rebuilt, and the good prices prevailing this season have made a success of what appeared at one time a desperate venture.

A number of contracts have already been signed for machinery to be in place in time to take off the coming crop. The grinding season usually begins in Louisiana about the middle or last of October, and the machinery people are always gratified when they can get their deals closed at such an early date as this. Mr. J. B. Levort, an extensive planter, has purchased a new mill for his St. John plantation, wherewith to enhance the excellent results he usually obtains, and Major P. Lagarde, of Thibodeaux, has closed a contract for a mill with six rollers, which will be in place in ample time to operate on the crop which is now beginning to come through the soil. Delgado & Co., extensive dealers in sugar, as well as planters and manufacturers, have also purchased a six-roller mill. Libby & Blom, of Bush Grove estate, will install a three-roller mill and engine, as will also Messrs. Caillonet and Maginnis. It will thus be seen that improvements of a radical character are being inaugurated, the mill being the heart of a sugar-manufacturing establishment. All the instances mentioned above are people who are already in the sugar business, and who are desirous of increasing their capacity. In no instance are they new establishments. That those who know the industry thoroughly, who have seen it in the days of its glory and in the period of its defeat, should thus testify their faith in its ultimate success, is perhaps a circumstance more portentous than would be the embarkation of new and hopeful adventurers.

Progress of the Tennessee Exposition.

[Special Cor. Manufacturers' Record.]

Nashville, Tenn., April 4.

Progress on the buildings in course of construction on the grounds of the Tennessee Centennial Exposition has been so satisfactory during the past two weeks that the practical completion of eight of them by June 1 next is assured. On that day the centennial of the admission of Tennessee into the Union will be celebrated, and on that day, also, the exposition will be formally inaugurated, to be opened to the public on May 1, 1897, for a period of six months. The exercises will take place in the Auditorium, which is now nearing completion, and will be entirely ready ahead of time. The completion of the tower, which rises 100 feet above the roof, and the finishing of the interior, constitute the bulk of the work remaining to be done. The plastering of the exterior is well begun, and the staff ornaments have been made and are ready to be put in position. The edifice, with its galleries, will seat 5000 persons.

The principal event of the past week was the letting of the contract for the erection of the Agriculture Building. This structure, wherein will be displayed the products of the field and farm, is of a particularly attractive design. It is in the Renaissance style of architecture, 300x200 feet, and the central dome rises to a height of 100 feet, while six minor domes balance and lend charm to the whole. There are four entrances under triumphal arches, embellished with handsome carving and surmounted with statuary. The location of the building on the grounds will be such that its splendid proportions can be seen to advantage from

all parts of the grounds. Of the thirteen bidders, Laurent & Pearcy, of Nashville, were the lowest, at \$28,700. This was \$1,500 under the next bid and \$11,000 less than the highest bid received. Work will be begun at once, and before the inaugural ceremonies of June 1 the outlines will be so far advanced that some estimate of its ultimate beauty can be made.

The beautifying of the grounds is being pushed rapidly, now that spring has opened. One florist is putting out 2,500 roses of the more satisfactory hardy varieties, which will bloom through this summer and again through next summer. Over 1,000 blossoming shrubs and evergreens, ordered from leading nurseries, are being planted about the grounds; and this is but the beginning, as the management is determined to make this the most beautiful of all expositions from a horticultural point of view. The entire west end of the larger lake will be given over to water plants. Shapely shade trees of from six to ten inches in diameter are being transplanted around the lakes and in other attractive localities. There are already hundreds of fine trees in the park, and with the hundreds more to come and the 1,000 of blooming shrubs and evergreens, the result cannot be anything short of genuine magnificence. The director-general has ordered 1,000 giant cacti from Mexico, and is now looking for as many century plants that are sure to bloom in 1897 as he can lay hands on.

The financial condition of the enterprise will be appreciated from the statement that all the contracts now outstanding amount to less than half of the actual cash in hand. During the summer and fall this cash balance will be largely augmented, perhaps doubled, while the erection of the buildings will proceed steadily until all are finished, and then the arranging of the special features will be looked after, so that before the opening day every detail of the preparatory work will be absolutely finished.

The people of Nashville and every interest they control, backed up by the whole State of Tennessee, are building and working for the success of the exposition. No State tops Tennessee in abundance of mineral resources and fertile lands, or surpasses it in fertility of soil, and this is what the people of the Commonwealth have determined to show to the world on the occasion of the end of their first century in history.

LELAND RANKIN.

A Department of Manufactures and Commerce.

W. D. Forbes & Co., engineers, Hoboken, N. J.: "You have our hearty endorsement in this move to get the powers at Washington to create a Department of Manufactures and Commerce. It is time that our country takes active measures to extend our foreign trade and not leave the brunt of the work to the manufacturer. One of the many lines of work which a department of the above-mentioned character could take up is that of international patent laws. Why should we, for example, send goods to Japan only to be copied? We wish you every success."

The Powhatan Clay Manufacturing Co., in a letter to the Manufacturers' Record, says: "We think your suggestion in regard to the creation by Congress of a Department of Manufactures and Commerce is an excellent one, and if carried out will be of great benefit to the trade of this country. We certainly hope that this bill will be passed before Congress adjourns."

The Board of Trade of Savannah has re-elected Mr. D. G. Purse, president, and W. C. Powell, vice-president.

Trade with Mexico.

(Special Cor. Manufacturers' Record.)

Mexico City, March 30.

The first and vital question that suggests itself to a manufacturer desirous of extending the markets for his products into a new country is, What are the transportation facilities? and in natural sequence follow the even more important queries: What rates are obtainable? What time is consumed in the transit of the goods? What are the trade customs? and so on. Each will be treated in natural order.

TRANSPORTATION FACILITIES.

Shippers from the central and seaboard territories of the United States—these are broadly shippers at towns between Chicago and New York—have virtually the choice of six trunk lines with which to reach the City of Mexico, the distributing centre of this republic. They are:

- (1). Via El Paso and the Mexican Central Railway. (Distance, El Paso to City of Mexico, 1,224 miles).
- (2). Via Laredo and the Mexican National Railroad. (Laredo to City of Mexico, 840 miles).

(3). Via Tampico and the Mexican Central Railway. (Tampico to City of Mexico, 785 miles).

(4). Via Eagle Pass and the Mexican International Railroad, thence joining at Torreon the Mexican Central Railway and proceeding to the City of Mexico over their rails. (Eagle Pass to City of Mexico via Torreon and the Mexican Central Railway, 1,090 miles).

(5). Via Vera Cruz and the Mexican Railway. (Vera Cruz to City of Mexico, 264 miles).

(6). Via Vera Cruz and the Inter-oceanic Railway. (Vera Cruz to City of Mexico, 360 miles).

Routes Nos. 1, 3 and 4.—The feeders of these routes from central United States territory are the Santa Fe, the Texas & Pacific, the Southern Pacific, with their connections. Business from the West over the Southern Pacific and Santa Fe routes enters Mexico via El Paso, and business over the Southern Pacific from the East enters Mexico at Eagle Pass, while seaboard and Eastern business for the Central Railroad comes in via Tampico, using the "Ward," the "Johnston" and the "Munson" steamship lines out of New York and Baltimore, and the "Atlantic & Mexican Gulf Transport Co." via Mobile and Tampico.

Route No. 2.—The feeders of this route from central United States territory are the Iron Mountain, International & Great Northern and the Arkansas Pass roads and connections. The National's Eastern business comes in through New Orleans by the "Morgan" Line ex New York, also the "Cromwell," and through Galveston by the "Mallory" Line, also ex New York.

Routes Nos. 5 and 6 handle principally seaboard and Eastern business, but also a little central territory business (principally over the Baltimore & Ohio and connections through Baltimore), using the "Johnston," "Munson," "Ward" and "Atlantic & Mexican Gulf" Lines, as above.

The present through rates are abnormally low, although rates New York and Baltimore to the City of Mexico by all the three water routes during the recent rate war approximated twelve cents gold per 100 pounds on all commodities in any quantity. All lines are quoting, at present, forty cents gold per 100 pounds on less than carload and thirty cents on carload quantities New York and Baltimore to the City of Mexico. Through rates from central territories are being run in combinations via New York, se-

curing lower rates by the water than are possible by all-rail.

In Mexico goods are generally shipped to a distributing centre, where the large wholesalers and retailers are located, and from whose warehouses the goods are distributed to the smaller towns, mining districts, etc. The principal distributing centre is, of course, the City of Mexico. Then, in some sort of order of precedence follow Monterey, San Luis Potosi, Puebla,

Shipments for importation through Eagle Pass, El Paso or Laredo should be consigned in care of a broker at such point of internation. If the shippers know of no reliable brokers, they should consign in care of

The Custom-house Agent.

..... Railroad.

.....

using the name of whatever railroad they intend their goods to go by; sending to such broker, promptly, copy of the bill of lading covering the shipment, with copy of the commercial invoice, and such other information about the packing of the goods, etc., as may suggest itself as useful to the shipper. In the case of shipments to be forwarded via Tampico or Vera Cruz, the goods should be consigned in care of the steamship line at Baltimore, New York or Mobile, whichever line it is intended to use, accompanied by prompt advice of the forwarding from point of origin, if outside of these ports, and with copy of bill of lading, commercial invoice and packing list, made out in conformity with the full specifications, as required by the Mexican custom-house authorities.

The average time in transit between central or seaboard territory and the City of Mexico is about three weeks, the custom-house formalities at the Mexican port of entry usually consuming about three days (except occasionally in the case of Vera Cruz, where there are frequently serious delays).

It may be prefaced that the merchants, whether in the larger or the smaller cities, are very conservative, and failures are of rare occurrence, merchants seldom entering into obligations beyond their ability to fulfil; but they are slow payers, and the credit system entirely prevails. This system of doing business has been fostered by the European manufacturers and merchants, so Americans here meet one of their first stumbling-blocks. They do not understand or appreciate sufficiently the benefits derived from giving credit; they jump to the conclusion that it entails sad losses. If they would look a little into the laws governing trading in this republic, they would better appreciate conditions. It is a trite saying here that a man cannot afford to fail, the complications emanating therefrom being too costly for the merchant failing. It is not uncommon for credits of twelve months to be given, six months being the usual time. Americans must learn to promptly answer letters, and fill orders immediately they are received; they should study the wants of the people, and send goods packed as they are desired, and not as "it has been our custom to do" for this or that trade. The invoices also are often desired specially made out, and the American shippers should not object to this.

Satisfactory progress is claimed to have been made with the Mexican Exposition. Doubts in certain quarters are entertained that it will prove a success. A cargo of German "Bochum" coke was last week imported into Mexico consigned to Chas. M. Barnett, Tampico. It is said to be the first cargo of German coke ever to have crossed the Atlantic for North America. The results obtained

at the smelters with this coke are anxiously awaited by the importers of American and English coke. The coke imports to Mexico this coming year will approximate, it is stated, about 100,000 tons.

The asphalt deposits at Tampico and up the Panuco river are being exploited by a Mexican-Chiengo company. Shipments are being made.

The rate of interest on deposits in the Mexican government's "National Pawnshop" will be reduced, effective May 1, from 6 to 3 per cent.—a great boon to the poorer classes, who use the institution largely.

Mexican cedar is finding an excellent market in the States at present, and the exports are heavy. Formerly the best market was found in Europe, but recently the States have offered the best shipping market.

The Vera Cruz harbor works progress satisfactorily, and the contractor, Sir Weetman Pearson, of London, has just signed a contract to improve the Coatzacoalcos harbor. This will open up the Tehuantepec Railroad and offer a short and new transcontinental route.

STEPHEN KOSLOWSKY.

A Southerner Dividend Payer.

The O'Neill Manufacturing Co., of Rome, Ga., is an example of how a properly-conducted manufacturing business will pay in the South when judiciously and persistently advertising in the Manufacturers' Record. At the annual meeting of the company a dividend of 10 per cent. was declared, in addition to a sum reserved for a surplus fund. This company manufactures molding, ceiling, stai'reases and other woodwork, and such is the quality of its work that it fills orders from Pennsylvania, Ohio, Indiana and New York, in addition to its local business. In fact, most of its work goes to the States named in competition with Northern concerns. Much of this outside business has been secured by advertising in the Manufacturers' Record.

Mr. W. W. Smith, of Nashville, Tenn., who was recently reported in the Manufacturers' Record as having purchased the town property of Grand Rivers, Ky., in a letter says: "The property bought by me and my associate, a gentleman of this city, includes about seventy-five houses, 1,500 town lots and about all the land comprising the Narrows at Grand Rivers on both sides of the Chesapeake & Ohio and Southwestern Railroad from the Cumberland to the Tennessee river, but does not include the two furnaces, the brick and tile plant and the saw and planing mill on the Cumberland river. It is our intention to energetically push this locality into the notice its merits deserve, but no definite steps can be taken until the court confirms the sale."

The Manufacturers' Record is now the only complete and reliable index of Southern progress and enterprise. Probably no man in the South, or interested in the South, today has as thorough and comprehensive a knowledge of the South's industrial conditions, its progress and its possibilities as has R. H. Edmonds, editor of the Manufacturers' Record, or can write about these in as attractive a way. The Manufacturers' Record ought to be a regular visitor to the library of every Southerner who feels a pride in our beloved section and an interest in its material wealth and progress.—Staunton (Va.) News.

Business men of Manchester, Va., have organized a Board of Trade with J. H. Patterson as president, and H. C. Beattie, vice-president.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Danger of Excessive Freight Charges

The tendency to consolidation in railroad lines, so prevalent throughout the country, includes the South as well as other sections. While it is attended with some danger of eventual financial disasters to the companies, the policy is pursued vigorously, and what might be termed railroad "trusts" are becoming as formidable as those in oil, sugar and tobacco. They have much more effect, however, on the business interests of the country, as they can raise or lower freight tariffs at will. It is unnecessary to say that the two great objects of combining a dozen or more roads into one system are to secure a monopoly of the business originating in the section traversed by the roads in the combine, and to prevent competition by absorbing in some way any parallel roads.

No one can realize what a railroad monopoly can do to paralyze industries and deaden the business interests in a community unless he resides in a community which is thus dominated. Every man who receives or ships a pound of freight is at its mercy. He must either accede to the terms of the company or be deprived of transportation facilities. If the tariff to a point 100 miles distant is as much as a competitor in a neighboring town pays to send goods double that distance, he may protest that it is unjust, but seldom will he get any redress. Perhaps he has \$20,000 invested in a factory. Exorbitant rates prevent him from making a profit on his goods. He has his money invested, however, and his plant will go to ruin if he does not keep it in operation. So he continues, gradually going deeper and deeper in debt, until forced to suspend operations by insolvency.

The railroad company has literally "biled him to death" commercially. It has not only taken the profits of his industry, but has forced him to transfer the best part of his investment to it, bit by bit. He could not sell out and give the real reason for so doing, as no one would think of purchasing a business which is literally eaten up by the transportation company.

The Manufacturers' Record has been led to discuss this matter for the reason that many parts of the South are suffering severely from excessive freight rates. Within the last two or three years so many competing lines have passed into the control of this or that corporation that there are several towns of over 20,000 people who are at the mercy of one railroad company, although five years ago their merchants had a choice of several competing routes. Complaints about freight rates which are ruinous to trade are increasing daily, and here and there are to be found instances of the evil which has already resulted. In a town of 2800 people in Tennessee two factories have suspended operations and a third is preparing to do so, not because they are insolvent, but the owners say they will be if obliged to pay the railroad what is asked for hauling freight. One of the factory owners is negotiating to move his factory to a point where competitive rates can be secured. To avert the general depression of interests, the people of this place are endeavoring to secure money to build twenty miles of railroad to give them another route. The owners of an extensive iron plant in Virginia are preparing to move further South for the same reason. A company including several large cotton-mill stockholders has been formed in South Carolina with

the special object of giving relief from what are claimed to be excessive rates to textile industries along the route of the proposed road.

In this connection the water transportation routes are receiving renewed attention. Little streams having but three and four feet depth at low water are being examined with a view of using them for steamers. Two companies are now being formed to place stern-wheel boats on Georgia rivers with the idea of affording water routes to the sea which will keep down the rates now in force. The railroads have been laboring under many disadvantages, and have made but little money, but they could not make a more serious mistake than to create the impression that consolidations and combinations mean arbitrary and exorbitant freight rates. The complaints about rates are becoming more and more numerous.

Compliment to President Williams.

At a recent dinner given at Savannah to President Williams and other officials of the Georgia & Alabama road, the following resolution was adopted:

"We recognize that this happy consummation (the Savannah, Americus & Montgomery reorganization) is largely the result of the untiring efforts of President John Skelton Williams, who, with his able associates (of whom, without disparagement to others, Director John W. Middendorf may be accorded the first place), in the face of overwhelming odds, succeeded in bringing out of chaos the old Savannah, Americus & Montgomery Railway, and of reorganizing and constructing upon its ruins the fair and promising property now known as the Georgia & Alabama Railway."

Important Decision.

The United States Supreme Court, through Justice Brown, has handed down a decision relative to a railroad company purchasing or otherwise controlling a parallel line, which is of great importance to the South, as the ruling may be adopted in other suits of a similar character in this section.

The question involved was the right of the Louisville & Nashville to acquire control, either by purchase or consolidation, of the property of another company whose lines are parallel with its own, the Louisville & Nashville and Chesapeake & Ohio Southwestern Companies' lines being a parallel between Louisville, Ky., and Memphis, Tenn. The constitution of Kentucky, recently adopted, prohibits to purchase under such conditions, and the suit as originally brought by the Commonwealth of Kentucky asked for an injunction against such proceeding, invoking the constitution. The Kentucky court granted a perpetual injunction, and when the case was taken to the Kentucky Court of Appeals the decision of the court below was affirmed. The case was brought to the United States Supreme Court by the railroad company upon a writ of error, the company alleging an entire disregard for the provisions of its charter granted by the State in 1850, long prior to the adoption of Kentucky's present constitution, which, in explicit terms, without saying anything about parallel lines, gave the right to "purchase and hold any road constructed by another company." The State court held that the State had a right to repeal or modify the charter. The United States Supreme Court, as one ground of its opinion, declared that the Chesapeake & Ohio Southwestern under its charter had no right to sell to a competing company. The decision practically gives the Illinois Central Railroad Co. control of the Chesapeake & Ohio Southwestern.

STANDARD RAILWAY OF AMERICA

How the Pennsylvania System Has Developed in Its Fifty Years of Existence.

The city of Philadelphia will be the scene of a notable event in the railroad history of this country when the fiftieth anniversary of the organization of the Pennsylvania Railroad Co. is celebrated on April 13. It is announced that the ceremonies will be of an imposing and elaborate character, and that eminent railroad officials, as well as prominent people from all parts of the country, will participate.

It is, indeed, fitting that this anniversary should receive suitable recognition, for in the fifty years of its existence the Pennsylvania has developed into one of the world's greatest railways. Few equal it in point of general excellence, and it is questionable if any line, either in this country or Europe, excels it, notwithstanding the high standard of the English corporations. The Pennsylvania seems to have in all its departments the proper men in the proper places—a rare feature in a railroad company. In tracing the reason for so many of the receiverships on American roads, it is often found to be that while the executive details were in the hands of competent and experienced officials, the financial management was weak and incapable, or vice versa. This is not so with the Pennsylvania. While its executive officers from the president down to the section foreman are experts in their several lines, the financing is done by men noted for their ability, experience and conservatism. Such is a simple explanation why the Pennsylvania can earn dividends when many other roads cannot earn their fixed charges, and why it is justly termed the standard railway of America—it has the right men in the right places.

For the benefit of its readers, the Manufacturers' Record herewith reproduces a few statistics which show the remarkable expansion of the system. It received its charter on April 13, 1846, from the Pennsylvania legislature, and construction work was begun on a route surveyed between Harrisburg and Pittsburgh in 1847. This was the original main line. It was not opened for operation, however, between the two cities until 1854. The first train made the trip on February 15 of that year. The next extension, between Harrisburg and Philadelphia, was secured by acquiring the Philadelphia & Columbia and the Harrisburg, Portsmouth, Mount Joy & Lancaster, and connecting these with the Harrisburg & Pittsburgh line, thus giving it a route across Pennsylvania from east to west. The policy of local development has been maintained by this corporation from the first, and among the projects which followed the completion of the main road were branches built to various cities in the State, nearly all of which have proved profitable feeders. Gradually the system extended into New Jersey, finally reaching New York harbor. As the Western States increased in population and business it extended into this territory by building new mileage or by absorbing other roads already in operation and linking them to it. A glance at the country's map today is all sufficient to show how wise has been its policy. It reaches the Mississippi river at St. Louis, the great lakes at Chicago, Toledo, Cleveland, Ashtabula and Erie. It touches one of the best harbors on Lake Ontario, the principal seaside resorts on the Atlantic coast from New York to Hampton Roads. Its branches ramify Pennsylvania, New Jersey, Delaware and the Chesapeake bay peninsula, while among its stations are the principal cities

in Illinois, Indiana, Ohio and the capital of the United States. It can ship ocean freight from all the seaports from Jersey City to Norfolk from its own docks or down the Ohio and Mississippi rivers.

Pittsburg is practically the centre of the great system. Here the East and West lines meet in two grand sections. The Eastern section comprises the Pennsylvania Railroad division, the United Railroads of New Jersey, the Philadelphia & Erie, the Philadelphia, Wilmington & Baltimore, the Northern Central, the Camden & Atlantic and the West Jersey, in all 4067 miles. The Western section represents 4326 miles, while, with the Cumberland Valley and Alleghany Valley roads, a grand total of 8816 miles is shown (according to reports corrected to January, 1896). The section west of Pittsburg comprises lines controlled by the Pittsburg, Cincinnati, Chicago & St. Louis and by the Pennsylvania Company, as it is legally termed. It was chartered for the purpose of managing in the interest of the Pennsylvania Railroad Co. all railroads controlled by it west of Pittsburg. In addition to the Pittsburg, Cincinnati, Chicago & St. Louis, the Pittsburg, Fort Wayne & Chicago, the St. Louis, Vandalia & Terre Haute and the Grand Rapids & Indiana, are included in this section.

The policy of obtaining as much local business as possible is strikingly verified in glancing over the little branch lines controlled by the Pennsylvania. On the section east of Pittsburg alone it controls 166 of these roads, varying from less than a mile to seventy-five miles in length, all entering some community or reaching some industrial enterprise. Not a few of them have paid for their construction by the operations of two or three years. In addition to enormously increasing the earnings of the company, they have tended to greatly increase the manufacturing and mining in the State, and thus have aided in its development.

The present general officers of the company, who are carrying out its time-honored policy of progressiveness to the satisfaction of the stockholders on both sides of the Atlantic, and who will be notable figures at the coming celebration, are as follows: George B. Roberts, president; Frank Thomson, John P. Green and Charles E. Pugh, vice-presidents; Samuel Rea, president's assistant; W. H. Brown, chief engineer; Robert W. Smith, treasurer; John C. Sims, secretary; S. M. Prevost, general manager; J. R. Wood, general passenger agent; Geo. W. Boyd, assistant; W. H. Joyce, general freight agent. The general offices of the company are at the Broad Street Station, Philadelphia, one of the largest and finest railway terminal buildings in the world.

New Route from Chattanooga.

The Seaboard Air Line has made arrangements with the Nashville, Chattanooga & St. Louis, by which a new route for Chattanooga and vicinity is opened to New York by way of Atlanta. William Hamblen has been appointed freight and passenger agent for the Seaboard at Chattanooga.

Illinois Central in St. Louis.

A dispatch from St. Louis announces that the Illinois Central now has its own route into that city. It has leased the Cairo Short Line, extending from the Central's main line to St. Louis, for ninety-nine years. This lease has been made upon the agreement of the Illinois Central to pay a dividend of 2½ per cent. per annum to the stockholders of this company from January 1, 1896. The Illinois Central has been entering the city over the Short Line for some time.

An Enterprise Revived.

The project of building a railway from Fayetteville, Tenn., into Alabama, which was begun several years ago, has been revived. The intention was to form a route from Fayetteville to some point on a railroad line to New Orleans, passing through a section of the South which has but few railroad facilities. The road was partly graded, and then the enterprise was temporarily abandoned. The Cumberland Construction Co. has been formed, with headquarters at Birmingham, Ala., to take up the work again. Mr. C. P. Perin, the general manager of the company, in a letter to the Manufacturers' Record, writes as follows:

"The Cumberland Construction Co., of which I am vice-president, has taken the contract for the completion of the line from Fayetteville, Tenn., to Madison's Cross Roads, in Alabama, a distance of thirty-two miles. The extension of the line from Madison's Cross Roads to Decatur or to Huntsville has not yet been determined. As soon as the direction of the line is determined from Madison's Cross Roads we will be ready to let a contract for that division of the work. This will probably occur within sixty days. When the road is completed, it will extend from either Huntsville or Decatur to Shelbyville, and possibly from that point to Nashville, Tenn."

Georgia Midland's Future.

The new owners of the Georgia Midland & Gulf road have completed the work of organization, under the title of the Georgia Midland Railway Co., and have elected the following officers: R. A. Lancaster, president; John F. Flournoy, vice-president; T. C. S. Howard, treasurer; N. D. Lancaster, secretary.

The directors are R. A. Lancaster, W. H. Palmer, J. H. Archer, of Richmond; E. R. and E. W. Lancaster, of New York; Seaton Grantland, of Griffin; Charles L. Davis, of Warm Springs, and G. Gunby Jordan, A. Ilges, N. N. Curtis and John F. Flournoy, of Columbus, Ga.

The Georgia Midland extends north and south through the western part of the State from Columbus to McDonough, 100 miles. By an extension of about twenty-five miles from McDonough the road could reach Atlanta, and by a spur of twenty miles from Columbus to Lonvale, Ga., it would have a connection with the Georgia & Alabama system. There is a strong probability that the Atlanta extension will soon be built. In fact, surveys have recently been completed for such a line. If it is extended to Lonvale it would give the Georgia & Alabama a connection with Atlanta, and the cities of Savannah, Americus and Montgomery a new route to that city and an opportunity for securing a competitive freight tariff. This would be the greatest advantage of such a connection. There are good reasons to believe that the new company will carry out both projects, as the Georgia Midland at present is forced to depend upon local earnings.

South Carolina Roads.

A very encouraging indication of the condition of railroad business in the South is given by the December report of the railroad companies in South Carolina to the State commission. Compared with December, 1894, twenty-five companies report an increase varying from 3 to 56 per cent. on completed lines. Of the balance, only two show a decrease, seven of the smaller lines not having reported as yet. The increase on the more extensive roads and portions of large systems is specially notable. The Atlanta & Charlotte division of the Southern increased

20.47 per cent.; the Asheville & Spartanburg division, 38½; the Georgia, Carolina & Northern division of the Seaboard Air Line, 46.56. Of the Atlantic Coast Line, the Wilmington, Columbia & Augusta division increased 21.2 per cent., and the Florence, 14.9. The smaller lines also make excellent reports. For instance, the Chester & Lenoir, a narrow-gage road, depending entirely on local business, increased 22.17 per cent.; the Carolina Midland, 23.61, principally from local traffic; the Ohio River & Charleston, 18.3.

This report is one of the best which has been filed with the South Carolina railroad commission for some time, and as much of it comes from business originating at points along the several lines, it goes to show that trade conditions are much better than in December, 1894. A summary of all the roads shows an increase of 13.06 per cent. in earnings.

Air Motors for Street Cars.

Mr. Robert Gillham, chief engineer of the Kansas City, Pittsburg & Gulf system, has been examining the compressed-air apparatus now in successful use in several European cities for operating street cars. In a recent interview Mr. Gillham thus describes the two most practical systems:

"In France I made an examination and test of the Markarski motors and was pleased with the results. The motors were operated on a street railway a short distance from Paris. There were numerous sharp curves and many severe grades, and the length of the road was four miles. The cars, in addition to the seating capacity inside, had seats arranged on the roof of the car, which enable these small motor cars to carry seated fifty passengers. The motor-car reservoirs were charged with compressed air at a pressure of from 600 to 800 pounds, which was reheated before passing to the small engines under the car seats by passing the air through a coil of pipe arranged in a hot-water receiver at the end of the car. A pressure-reducing valve was used of most clever design between the air reservoirs on the car and engines, which limited the initial air pressure in the engine cylinder to sixty or seventy pounds a square inch. Motors of this type were arranged to run from ten to twenty-five miles before recharging with air, and in some cases have made a much larger mileage. These motors in some respects resemble in appearance an electric motor of the storage-battery type, such as is commonly seen abroad where experiments with the storage battery are being tried.

"Perhaps the best example, and one that may be classed with the first successful attempts in operating compressed-air motors by receiving the air locally at fixed points along the street railway, was tried in Chester, England, in 1890. This road was constructed as a low-pressure system, and embraced an air-compressing station where the air was compressed to 150 pounds a square inch and conducted along the street outside the tracks to local charging stations fixed at a distance of 3000 feet apart. There were no mechanical difficulties whatever. The street railway in question was an old horse railway that required no change except the laying of the small air pipe along the tracks and the building of the air-charging valves every 3000 feet below the street surface. The air-charging stations, when examined from the street surface, look, in some respects, like the carrying pulley pits on a cable railway, only that they occupy a smaller space, being the space from the centre of one track to the outside rail of the same track. These stations offer no greater obstruction in the street than an ordinary pulley pit on a cable railway.

When the motorman wishes to take a

fresh charge of air, on approaching one of the charging stations, he lowers a lever, on the lower end of which is arranged an arm very like a plowshare, but not longer than six inches, which enters a slot and gradually opens the swinging cover to the station. The car valve stem is guided into a rotating arm of the street valve, and the car is charged with air in two or three seconds, while moving slowly over the charging valve in the street. As the car passes from the station the swinging doors are closed and an observer would not know that the motor car was being charged with air while in motion unless informed."

Cape Fear & Yadkin Valley.

Judge Simonton, of the United States Court, has rendered a decision relative to the sale of the Cape Fear & Yadkin Valley road to the effect that the road should be sold in its entirety, and not in parts, as desired by some of the bondholders. This is the plan advocated by the Baltimore bondholders' committee.

Along the Florida Keys.

The latest project to give an all-rail route from Key West, Fla., to the mainland is that being promoted by the Tropical Electric Co. This has recently been organized in Key West by J. L. Watrous, J. M. Phipps and others. It proposes to build a trolley line along the Florida Keys to Miami, the present terminus of the Florida East Coast Line of railway. The estimated distance is 150 miles.

The Gulf Coast Canal.

Relative to the project to construct a canal along the gulf coast of Texas to connect Galveston and the Rio Grande by an inland waterway, Mr. T. E. Tarnay, of Detroit, Mich., one of those interested, advises the Manufacturers' Record that the matter has not matured as yet, and that no arrangements have been completed.

Railroad Notes.

Mr. F. J. Maloney has been appointed traveling freight agent for the Chesapeake & Ohio.

The Baltimore Traction Co. has ordered seventy-five open cars for its street railway summer service.

The Baltimore, Middle River & Sparrow's Point Company has ordered six additional electric cars for use in the suburbs.

The Plant system is running a special vegetable train from Gainesville, Fla., to New York. The train consists of twenty-five or thirty cars daily.

Edgar A. Ross has been appointed receiver of the Macon & Northern road in place of Wm. H. Ross, who is prevented by sickness from discharging his duties.

A circular issued by the Macon & Birmingham Company announces that Mr. Julian R. Lane is to be retained as its general manager by the parties now in control.

Mr. A. L. Akers has been appointed general manager of the terminals of the Cleveland, Cincinnati, Chicago & St. Louis and the Chesapeake & Ohio systems at Louisville.

The New York and Florida special over the Plant system will start on its last southbound trip from New York April 15. The last northbound trip will start from St. Augustine April 15.

Over 50,000 quarts of strawberries have been shipped by rail from Lakeland, Fla., to the North within one month. They sold for twenty-five cents per quart, average price, or \$12,500.

President Francis L. Gowen, of the Choctaw, Oklahoma & Gulf, announces the appointment of Mr. Henry Wood as general manager of the company, with headquarters at South McAlester, with general charge and supervision of the operation of all departments of the company.

The Texas & Pacific Company, of which Mr. Gaston Meslier, at Dallas, is general passenger agent, has issued a very attractive folder containing timetables, also much information about Texas in a condensed form, which is of special interest to real-estate investors and settlers.

J. C. Devlin, of Hernando, Miss., has invented a brake for railroad purposes, which, it is claimed, will stop a train within 25 per cent. less distance than the brake in general use. By Mr. Devlin's invention brake shoes are forced against the rails as well as the wheels, thus making a double resistance.

The Chesapeake & Ohio Company is now operating its passenger trains into Louisville direct by way of the Shelbyville "cut-off," which the Louisville & Nashville has recently built to shorten its line between Louisville and Lexington. This extension of the Chesapeake & Ohio service will greatly increase its traffic to Louisville.

The Texarkana & Fort Smith Railway officials announce that through passenger trains on their line will be put on between Texarkana and Shreveport on April 15. The distance between the two points is seventy-two miles. This road is part of the Kansas City, Pittsburg & Gulf system, now building from Shreveport to Sabine Pass.

At the annual meeting of Houston & Texas Central Railway Co., the following officers were elected: President, Thos. H. Hubbard, New York city; vice-president, G. A. Quinlan, Houston; secretary and treasurer, E. W. Cave, Houston; assistant secretary and treasurer, L. S. Gates, New York city; directors, Thos. H. Hubbard, L. E. Gates, J. Krutschmitt, San Francisco; G. A. Quinlan, T. W. House, A. P. Root, C. W. Bein, J. M. Lee, E. W. Cave, Houston, Texas.

The Texas & Pacific is building new chair cars at its shops to be used on all through trains. The cars will be sixty-eight feet long, upholstered in the latest style, lighted with Pintsch gas and provided with every modern improvement. One of them will be turned out in the course of the next two weeks, and others will follow as rapidly as they can be constructed. It is the purpose of the management to provide the newest and best equipment that can be purchased for its patrons.

Mr. Thomas Seddon, president of the Sloss Iron & Steel Co., Birmingham, writes the Manufacturers' Record: "There is no significance to be attached to our shipment of pig iron to England. We shipped two small lots of 250 tons each as samples to pig-iron brokers, who wanted to have it used over there to see whether anything could be done with our iron abroad, and as under the very depressed times we are now having there is an apparent profit between the Birmingham and the England markets, provided we can secure a vessel going abroad light, and it just so happens that owing to light shipments of cotton several vessels wanted stiffening, we were enabled to get an abnormally low rate of freight, which allowed us to make the shipment. Of course, we are willing to have the experiment made to see if anything in the future will develop from it, but I have no hope that any considerable business is possible with the other side."

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Some New England Views on the Cotton-Mill Question.

The Boston Advertiser, in seeking to vent its spleen against the South by reason of the competition which Southern cotton mills are forcing upon New England, says:

"The thousands of dollars' worth of new machinery which is being constantly added to established plants in New England, unfortunately is seldom given the prominence that is accorded the transference of a few carloads of antiquated machinery from some Northern mill to a point in the South, or the alleged prospecting of some New England mill official."

The Advertiser seems to have made a slight mistake. If it has heard of any transferences of antiquated machinery from New England to the South, the Manufacturers' Record would be very glad to have the particulars. Does it accuse the Massachusetts Mill Co., of Lowell, of equipping its new mill at Rome, Ga., with antiquated machinery, or does it lay this charge to the Dwight Company's \$600,000 mill at Gadsden, Ala.? Do the investigations of such men as Wm. C. Lovering, Arthur Amory, Edmund Dwight, C. P. Baker and others, who have been investigating the South from time to time with a view to the selection of good locations for cotton mills, come under the head of its "alleged prospecting of some New England mill official?" The Manufacturers' Record has been laboring under the impression that men of this standing stood sufficiently high in New England to avoid such a slighting reference as this to their trips of investigation—investigations which they have never attempted to deny.

The New England papers are crowded with matter relating to the South's competition in cotton manufacturing, and almost every issue of every leading paper in that section gives much attention to the subject. The Lowell Citizen, in giving a number of interviews with prominent cotton-mill people in Lowell, says:

"At first it was supposed that the Southern operatives were not capable of making print cloth, but now it is reluctantly admitted that they can do it. Most millmen here say that it is only a question of time when the operative in Dixie become so skilled as to compete with us in all branches of textile-making." * * * Another Lowell mill corporation has a site in view in the South in case the competition drives them there, but at present their mills are running full. The situation now is that one Lowell mill is manufacturing in the South, another has applied to the legislature for an extension of capital to go there, another is compelled to shut down forever, and another has its eye on a location in case it becomes necessary to move." * * *

Treasurer Clark, of the Boott Mills, says that he is running the plant to its full capacity, because it is more profitable to do this than to run on part time or shut down. Mr. Clark at one time thought seriously of establishing a mill in the South, but the idea has been given up, however, for the purpose of gradually changing the machinery in his plant in order to make a grade of fine goods, which it is still possible to produce at a profit here. Instead of establishing a mill in the South, he thought it wiser to devote all his energies towards getting the most out of the present plant."

Hon. T. Jefferson Coolidge, president of the Lawrence Manufacturing Co., in

referring to the decision of his company to sell out a part of its plant and abandon that portion of its business, said: "The Lawrence Company found it could not make money on four-yard sheeting, which it has made for twenty years, because sheeting is made in the South and we cannot compete with Southern mills." * * * If the stockholders desire to build Southern mills, they have their money and can do so, but the directors considered it their duty to return the stockholders the money, and that seemed the most conservative and wisest course."

Mr. Edmund Dwight, a leading New England cotton-mill man, in an interview in Atlanta last week, said: "Of course, fine goods can be made in the South. It is simply a question of skill and machinery, and money will buy both. Some of the Southern mills are already manufacturing fine grades of print goods." * * * In the long run the Southern operative lives just as well and has just as much surplus, if not more, than the Northern operative, who gets a little larger wage fund."

The Boston Journal, under the heading of "Are Our Mills To Leave Us," takes a rather pessimistic view of the outlook in that section. It says: "Nothing has occurred of late years of so much interest to manufacturers as the shutting down of the Lawrence Manufacturing Co.'s plant. This company has been one of the most successful in New England, and accumulated a surplus nearly equal to its capital. Its managers are certainly able men; among the best in the community. The deliberate judgment of such able men as its officers is a cause for profound reflection. Is it the beginning of the end? Is it possible that Massachusetts industries are on the downward path?" * * *

We have the fact that such able and experienced manufacturers as those in the Lowell Company have decided after the most careful deliberation to get out of the business rather than to build a Southern mill or to change their present mill so as to make fine dress goods under our present tariff.

All the manufacturers in New England today are discussing this move and wondering whether their action is wise or not. Southern competition is unavoidable; foreign is not. Before more of our best mills are forced to go out of business, thereby depriving thousands of employment, we must give our manufacturers adequate protection, so that they can utilize the skill of well-paid labor by the manufacture of fine goods which are now imported."

The Manufacturers' Record, with no ill-will whatever to New England, necessarily rejoices in seeing the fulfillment of the predictions which it has been making for so many years. Southward industrial development is rapidly tending. This, however, does not mean the decadence of New England. It does mean that that section must readjust its industrial interests and must abandon the general lines of manufacturing for which the South has pre-eminent advantages, and turn its attention more largely to other branches of industry.

A New 10,000-Spindle Mill for Spartanburg.

The project for another cotton mill at Spartanburg, S. C., noted in our last issue, has resulted in application being made for the incorporation of the Arkwright Mills, with a capital stock of \$200,000, and it is the intention to commence work as soon as possible on a 10,000-spindle cotton mill. Books of subscription have been opened by the promoter of the enterprise, Mr. R. Zim Cates, and the results have been as noted. The incorporators are Messrs. R. Zim Cates, John B. Cleveland, Joseph Walker, J. B. Lee, S. J. Simpson and W. F. Smith.

Card Clothing.

Lowell, Mass., March 21.

Editor Manufacturers' Record:

When we come to consider the value of card clothing we find that there are several essential points that will need to come to our notice. The life or length of time that card clothing will do good work depends not only upon the speed and quantity of work turned from the card, but on the foundation, the tempering of the wire, the numbering of the wire, as well as setting and system of grinding.

We must not expect a card to run as many years doing heavy work as it would in turning off fine work, not if the same grade of wire was drawn to the cylinder, as is often found to be the case. This point I desire to emphasize. It may not meet the approval of manufacturers, nevertheless it will bear discussing. The writer is of the opinion that the system of clothing card cylinders so prevalent in the United States, with the same grade of card clothing so far as the foundation, number of wire and points per square foot is concerned, is wrong.

Here, for instance, is a mill or set of mills running heavy numbers in their spinning department. This calls for a heavy grade of carding. Now, this being the case, what kind of card clothing ought to be drawn to the cylinders, doffers and tops? Is it not practical to assume that a coarser grade of wire, with a firm foundation, and open set of points of teeth should be used? But what do we find? Why, a medium grade of card clothing. And when we make inquiry as to this condition of card clothing we are informed by the several agents and superintendents that the reason for using medium grades of card wire is to meet the wants of the selling agents. If the selling agents called for a finer grade of goods it would be quite out of the question to furnish a good grade of cloth with the card clothing set with coarse numbers of wire; while, on the other hand, if the selling agent called for a coarse grade of goods, it would not be policy to card the product with fine numbers of wire. This I find to be the condition of mills both North and South.

Now, it may be quite impossible to arrange our mills so as to meet the wants of the fluctuating market, but for all that the principle is the same. If manufacturers have a desire to get all the value out of the card clothing possible, then let them decide what goods to make and then arrange for a suitable grade of card clothing. Coarse yarns will call for a firm setting of wire, with reduced numbers of points. Medium counts of yarn will require a medium number of card wire, while a finer grade of yarn will need a finer number of card wire with close setting. Medium counts of card wire never should be utilized for coarse numbers of yarn, and yet we find throughout the great New England manufacturing centres heavy grades of carding being turned off with finer numbers of wire than ever ought to be used. This is why card clothing gives out sooner than manufacturers naturally think or suppose it should.

When I speak of medium counts of wire I mean No. 33 for the main cylinders and No. 34 for the doffers. When we come to discuss the number of wire for the tops, the writer probably will take advanced ground.

It has been the custom for a good many years to set the foundation for tops with a coarse grade of wire as compared to the cylinder and doffers. The point made in favor of this system is the constant strain brought to bear upon the wire by the action of the strippers. This point no doubt is well taken, but I am not in favor of coarse wire on the tops. I consider the clothing on the top flat a very important factor, from the fact that it gathers out the short fibres, neps, shell

and other foreign trash. This being the case, I claim that a finer grade of wire with more points to the square foot, This at once adds a larger carding surface, which enables the points to gather out a larger per cent. of short fibres, etc. It will pay any manufacturer who has not done so to look into this suggestion and try it. The writer can well remember the time when he was just as much opposed to this innovation as anyone, but after applying a finer grade of wire it at once became evident to him that a permanent departure in this direction would not only be safe, but a decided improvement.

Now, so far as renewing the clothing is concerned, it will pay, even if it had to be put on every four years instead of six or eight. As is well known, the object of carding cotton is to separate the short fibres and dirt and to straighten out the long and well-matured fibres as they are teazled through to the doffer. A fine grade of wire for tops will impart to the carding surfaces a greater retentive power, thus enhancing the value of the carding as it passes to the coiler.

Since the manufacturers have placed the revolving flat cards in their mills the system of stripping top flats has very materially changed. On the old stationary top flat card the automatic stripper lifted the top from the cylinder, when the stripper arms forced the stripper board, covered with rubber sheets set with open steel wire, into the card wire on the top, removing what waste had been gathered from the carded cotton. This brought a severe strain upon the wire, causing it to give way. Now, with the top flat on the revolving flat card this system has been changed. The stripping arrangements on these cards is very easy to the tops as the motes, seeds, shell and short fibres are removed. This consists of a slow-motion comb, acting with a downward stroke. This comb is set so that when the revolving flat emerges from the carding surface and passes up by the comb the wire comes in contact with it, and thus the top is stripped clean. We can now see very readily how it can be made practical to use a finer grade of wire very successfully.

We now come to another point for discussion, and that is, the grade of wire to use. What grade of card wire will give the best results? I am aware that there is a wide difference of opinion among carders, while on the other hand practical men claim that the difference in carding is slight between round, side-ground or double-convex wire; that it is of but little consequence which is put onto carding engines. What every manufacturer is desirous of securing is a grade of wire that will stand up to the work for a series of years, and at the same time present to the cotton fibres a uniform point of tooth. After several years careful observation the writer is of the opinion that too much care in selecting card wire cannot be given. The reason for this is in the fact that the processes of tempering cast-steel wire is very uncertain. A very slight deviation in the process of hardening and tempering may be and very often is the cause of making the wire brittle. Card wire should be thoroughly tested before it is set to the foundation, whether it be of cloth or leather.

As previously stated, the writer is of the opinion that the methods of setting and grinding card wire has very much to do with the successful manipulating of cotton fibres. Almost every card-maker has a theory of his own as to the position of the bend that shall be put into the wire.

The English manufacturers of card clothing have always put the bend into the wire closer to the foundation than the American manufacturer. They claim that a better point can be secured during

the process of grinding, and that a better grade of carding will follow from the fact that the wire will hold in position better. The American manufacturers, in forming the bend in their card wire, leave a longer distance from the foundation up to the bend, and claim for this system more elasticity and less liability to break.

Now, I am strongly inclined to believe that the English bend is on the correct principle. So far as the elasticity is concerned, that will take care of itself. After the wire has been set and ground and put to the process of carding cotton, it will be found that the strain brought to bear upon the foundation will open up the fibres of cloth or leather to such an extent as to give the wire sufficient elasticity as to relieve it from all undue strain. If the wire is carefully hardened and tempered so that it will stand well up to the work, I should say that an English bend would be the best.

There is another point that it will be well to consider, and that is, the angle of the bend. As is well known, the points of card clothing on main cylinder and doffer run in opposition to each other.

The question to settle is the angle of wire drawn to cylinder and doffer. There must be a stronger bend in the card wire that is to be drawn to the doffer. The reason for this is quite obvious when we come to consider that the diameter of the doffer is twenty-four inches, while the main cylinder is fifty inches. Now, if the angle of setting was the same, it would be found that the points of teeth on the doffer fillet would set too far back. In this position the points of teeth would be ground to a surface point instead of a diamond point. The object of card clothing on the doffer is not to card cotton fibres, but to remove them from the carding surface of the cylinder. Now, in order to do this the bend in the wire should be of such an angle as to present to the carding surface of the cylinder sharp points of teeth.

Cotton Spinning South and North.

The announcement that the Lawrence Manufacturing Co., of Lowell, has given up the manufacture of cotton cloth because unable to compete with Southern mills is not a surprise. It has been recognized for years that the South is so advantageously situated that, soon or late, it will have the field wholly to itself except for the production of such goods as require special skill and peculiar atmospheric conditions to yield the best results in spinning. The climatic difficulty is a mere bugaboo, for as fine cloth can be produced in the Carolinas and Georgia as in Massachusetts. The Lowell mills, however, are so well entrenched with established trade, scientific plants and experienced operators that it is reasonable to suppose they will retain their supremacy for many years. At any rate, there is no alarm in New England, although they have resolved to meet competition by the establishment of textile schools and in every other way that experience can suggest. The manufacture of coarse goods is quite another matter. Not only can the labor be found in great abundance sufficient for its production, but the important item of transportation expense is nearly eliminated, since the cotton-field is practically at the Southern mill doors. This consideration is of more value in determining the problem than the cheaper labor and longer hours.

Many of the big Northern mills have built branches in the South already, in which they propose to continue the production of cheap cloths. * * That it will be many a day before the Fall River looms will have to close down is shown by the fact that mill-building is still going on in Massachusetts and is likely to continue.

The interests of the North and South

are not antagonistic. The New England spinner possesses great advantages over the European manufacturer, and the two sections will continue, hand in hand, gradually to absorb the cotton-spinning trade of the world. The United States had but 16,100,000 spindles on September 30 last, while Great Britain had 45,400,000 and the Continent 28,250,000. The annual consumption of the Continent was 5,096,000 bales of 400 pounds each, exclusive of 300,000 bales of Asiatic cotton spun in Russia, and the British consumption was 4,080,000 bales. The United States consumed only 3,148,000 bales. We have but made a fair beginning. The time will come when we shall cease the enormous waste of exporting the raw material for other countries to work up and sell. We have a practical monopoly of cotton-growing, and we can just as well have a monopoly of cotton-spinning. All that we need is capital, and the certain and large profits of the business are such that investments in mills must steadily grow.—Louisville Courier-Journal.

Textile Notes.

The erection of a cotton mill and a knitting plant is talked of at Austell, Ga., and Mr. C. J. Shelton is interested.

A movement is on foot at Palmetto, Ga., for the erection of a cotton mill, and Mr. J. T. Beckman is interested.

The receivers of the Maryland Silk Mills, of Hagerstown, Md., have sold the plant to Mr. A. P. Connor for \$5300.

A movement has been started at Sumter, S. C., for the erection of a knitting mill, and subscription books are now being circulated.

Mr. E. A. Palmer, of Providence, R. I., will establish in Cheraw, S. C., a plant for the manufacture of braided cord, flat and round corset strings, lamp wicks and kindred articles.

Mr. W. C. Sibley, for many years president of the Sibley Manufacturing Co., of Augusta, Ga., has resigned his position and will be succeeded by Mr. John W. Chaffee, now secretary-treasurer of the company.

The Birmingham Cotton Factory, of Birmingham, Ala., has started 1500 more spindles to work, and another frame of 200 looms is being installed. The company is very busy, having at present a market for all of its product.

The Darlington Manufacturing Co., of Darlington, S. C., has been making regular shipments to China for several years past, and last week received an order for 1000 bales from Shanghai. The order is now keeping the plant busy.

The project for a cotton-mill company at Gainesville, Texas, is meeting with success. A capital stock of \$100,000 is proposed, payments for which are to be made on the monthly-payment plan. Mr. W. T. Roberts is the prime mover in the enterprise.

The co-operative People's Cotton Factory, now forming at Montgomery, Ala., has purchased twenty-three acres of land as site for its factory and completed arrangements for a branch track to same. Material will be placed on the ground and work on the buildings commenced in the near future.

The York Cotton Mills, the new plant for Yorkville, S. C., has placed orders for most of the machinery to be used. Pickers, flat cards, drawing frames, etc., have been ordered from the American Machine Co., of Pawtucket, R. I. Main building to be 100x170 feet, with 27x80 power-house, and containing 3000 spindles, costing complete about \$30,000; contract for spinning given to the Whitin Machine Works, of Whitinsville, Mass.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, April 7.

An improved demand obtains for cotton oil, while values are decidedly firm, with an upward tendency, notwithstanding the adverse attitude of kindred and competing products. Exporters have been in the market continuously, and upon a basis slightly below the ruling figures, further trading would have been assured. At the close, buying interests abated, but holders were unmoved, unless at 26 cents, while bids were at 25 $\frac{1}{2}$ to 25 $\frac{3}{4}$ cents, with regard to prime yellow. Lard is still on the wane, with the result that compound lard is practically out of the market, thus almost effectually closing an important cotton-oil outlet. Prices of the pure product are quoted, Chicago, May options, at 5.05 cents, the outlook indicating still lower values, owing to the preponderance of stocks. While recent advices from the South intimate the last run of oil has been manufactured from cheaper seed, exactly the reverse conditions obtain in English seed-crushing centres. The diminished seed stocks in Alexandria, Egypt, are firmly held, and offers are made sparingly, with the result that the oil output in England has declined. Prices of oil in England are yet on a low basis, however, but the probability of an advance when oil becomes more scarce will in part explain the interest evinced in American oil. Liverpool refined is quoted at 17/ to 17 $\frac{1}{2}$ in export barrels, according to quality and quantity. A prominent English consumer writes your correspondent as follows: "Low prices for goods never yet benefitted anybody, not even the consumers, in the long run, while the surplus stocks of animal and vegetable products throughout the world have proved more harmful than otherwise." Clearly this outlines the situation with regard to lard and tallow, the enormous and cheap supplies of which have rendered the comparatively light stocks of this season's output of cotton oil more of a drug on the market than double the quantity during a more auspicious season. The setbacks with which speculators have been beset have had the effect of shutting off further efforts in that direction. Receipts approximate 4000 barrels. Herewith we quote: Prime crude, 21 to 21 $\frac{1}{2}$ cents, scarce and correspondingly firm; loose at the mills, 16 $\frac{1}{2}$ to 19 $\frac{1}{2}$ cents, according to location; prime summer yellow, 25 $\frac{1}{2}$ to 26 cents; off yellow, 25 $\frac{1}{4}$ to 25 $\frac{1}{2}$ cents; butter oil, 27 to 28 cents; white oil, 28 $\frac{1}{2}$ to 29 cents, and soap stock, 7 $\frac{1}{2}$ to 1 cent per pound. Freights to Liverpool, 2/; London, 2/3; Antwerp, 2/6; Hamburg, 75 pfgs. per 100 pounds; Rotterdam, 80 cents per barrel, and 3/3 to Marseilles. The principal shipments of the week were consigned to France, while an equal quantity were shipped to England and South America. A direct shipment of 125,000 gallons is reported from New Orleans to Liverpool.

Cake and Meal.—The market presents no new feature. The scarcity of American cake and meal abroad, together with the immediate prospect of a further advance in values, has stimulated the export trade. Shipments aggregating 2000 tons are reported from New Orleans to Liverpool, while from Galveston heavy shipments are making for the Continent. The home demand is fair at unchanged quotations. Delinted American cottonseed finds a ready market in England.

Receipts are 540 bags hulls, 410 bags ashes and 1200 bags meal, and eighty tons of meal at Boston.

Cottonseed-Oil Notes.

The exports of cottonseed products from the port of Galveston, Texas, for the month of March were 18,697 sacks of cottonseed cake, 1000 barrels soap stock, 3108 barrels of cottonseed oil and 335,864 sacks of cottonseed meal and twenty bales of cottonseed hulls.

It is stated that a cottonseed-oil mill will be built at Colorado, Texas. The committee of business men having the matter in charge have raised two-thirds of the necessary funds, and many citizens are yet to be called upon. It is proposed to erect a mill to cost \$40,000.

The plant of the Planters' Oil Mill at Greenville, Miss., was wrecked by an explosion of the boilers on the 1st inst. After the explosion fire seized the ruins, causing a further destruction of property. It is stated that the loss will reach \$30,000, on which there is an adequate insurance.

In New Orleans, receivers' prices for cottonseed products are as follows: Cottonseed, \$9 per ton (2000 pounds) delivered net to the mills; cottonseed meal jobbing at depot, \$17.25 to \$17.50 per short ton, \$18.75 to \$19 per long ton for export f. o. b.; cottonseed oil, 20 to 20 $\frac{1}{2}$ cents per gallon for strictly prime crude, in bulk 17 to 19 cents, and 24 to 25 cents for refined oil at wholesale or for shipment; oilcake, \$18.75 to \$19 per long ton f. o. b.; foots, 1 to 1 $\frac{1}{2}$ cents; linters—A, 4 cents per pound; B, 3 $\frac{1}{2}$ to 3 $\frac{1}{4}$ cents; C, 3 cents; hulls delivered at 20 cents per 100 pounds, according to location of mills.

The market for cottonseed products at Houston, Texas, is quiet, with no material change in prices. The late export movement has reduced the stocks of meal and cake so that they are pretty well cleaned up. It is impossible to reach any definite conclusion as to the amount of oil held by Texas mills, but it is said that stocks are still large. The Houston Post, in reviewing the market, says: "The manufacturers generally want better prices, and part with the output reluctantly at present figures. Some sales were made in Houston and other Texas points recently at 17 cents for crude loose f. o. b. at mills."

Wants to Represent American Manufacturers in Europe.

A gentleman of extensive business experience contemplates several years residence abroad, and will be glad to negotiate with manufacturers desirous of introducing their products in the markets of Great Britain and the Continent. Address "Export," care of Manufacturers' Record, Baltimore, Md.

The People's Cotton Factory, of Birmingham, Ala., has purchased site and will soon commence work on its plant. The site contains twenty-three acres, and it is intended to build a complete modern plant of 10,000 spindles for manufacturing four-yard goods.

The directors of the Tombigbee Cotton Mills, of Columbus, Miss., held their annual meeting last week. Mr. Harrison Johnston, president, read a report of the company's standing. Results were very satisfactory to the directors, and a dividend of 10 per cent. was declared. This company has had a most successful career, having started in 1889 with 120 looms, 460 spindles and \$144,000 capital, and this equipment has been increased to 8000 spindles and 250 looms, all being paid for out of earnings, besides declaring dividends.

MECHANICAL.

Modern Factory Construction.

Recent examples of factory construction show notable improvements in this class of buildings. An important feature

vertical lift of twenty-five feet, a capacity of seven tons and is what is known as a three-motor type crane. The generator and motors were made by the General Electric Co. There is also a hand-crane, of three tons capacity, built by the Boston Bridge Co. The bays are fifteen

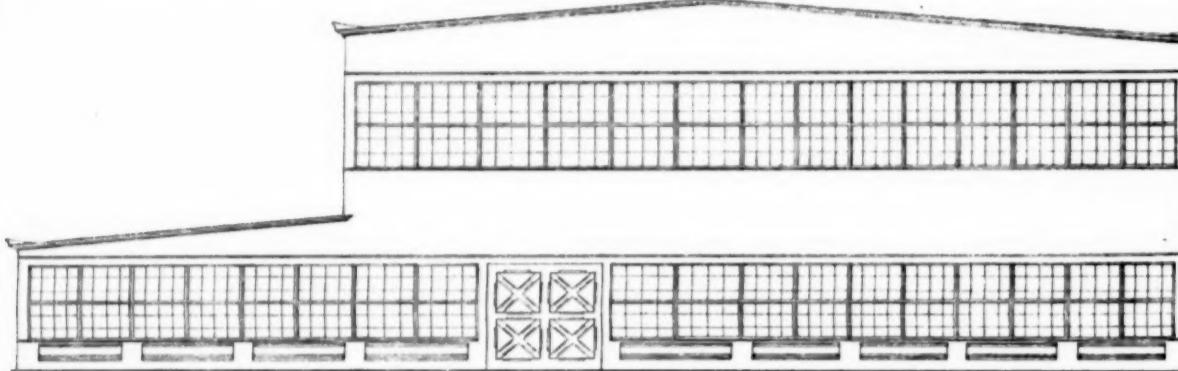
Engine and boiler-rooms occupy two bays each in the lean-to, where are also the washroom, blacksmith shop and a large storeroom.

The engine is a 12x36 automatic cut-off high-pressure Corliss, built by the Corliss Engine Co., Providence, R. I., and

tar concrete, well rolled and tamped, on which is laid a hemlock floor, and on top of this a seven-eighths maple floor.

A Proposed Marine Plant.

Messrs. J. P. Andre Mottu & Co., of Norfolk, are interested in the formation of a corporation to be known as the Norfolk Docking, Shipbuilding & Machine Co., with \$500,000 capital. They state that an option has been obtained on forty acres of land on the harbor, with 2800 feet of water front, where a depth of twenty-five feet can be obtained at low tide. Plans for the plant have been prepared by Mr. Frank B. King, and it is to include a foundry, machine shops, wharves and slips, in addition to a floating dock of steel to accommodate a length of 400 feet and a width of seventy to eighty feet over all. As an argument in favor of this plant it is stated that during 1894 over 6000 vessels of all kinds, not including regular line steamships, touched at Norfolk, while eleven lines of vessels call at this port. The tonnage entering and clearing at Norfolk in 1894 was 3,997,850, only about 750,000 tons less than at Baltimore, yet Norfolk has but few facilities for marine repair work compared with Baltimore. It is esti-

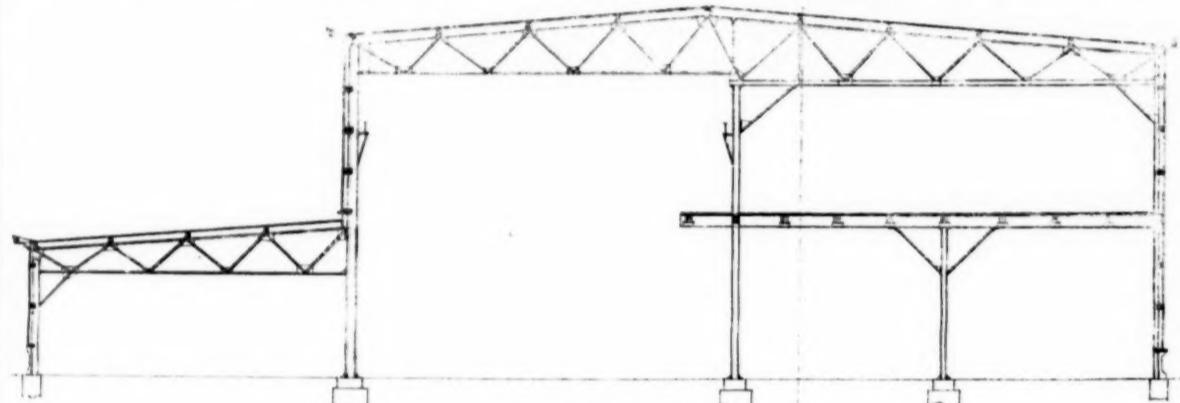


END ELEVATION.

to which proper attention is now given is that of lighting. Buildings recently erected for the Granger Foundry & Machine Co., Providence, R. I., furnish conspicuous instances of modern methods, and are exceptionally complete in every detail. They were built by the Berlin Iron Bridge Co., of East Berlin, Conn., and are shown in the accompanying illustrations. The main building is 305 feet long and 110 feet wide. The storage building is 40x100 feet. The first-named building is of composite construction, an iron framework supporting the roof, crane rails and gallery floor, the whole resting upon a heavy granite foundation. Sides of the building are composed principally of windows, glazed with heavy-ribbed glass. The intermediate portions of the building are made up of one-and-one-half-inch tongued and grooved spruce, covered with building paper and slated on outside. Window frames and sheathing are all fastened to 4x6 spruce purlins bolted to the iron frame. A tar and gravel covered roof completes the building. The shop is divided into three parts, including a two-story portion forty feet wide, with a crane running the same width, and a lean-to of thirty feet. Nearly the whole length of the building

feet three inches apart, the well-appointed offices occupying the first two bays, the draughting-room the same number and the pattern-shop nine. The balance of the gallery is used as a copper shop. The building is heated by di-

the boiler is a 125 horse-power horizontal tubular, built by Wm. Allen & Sons, Worcester. To avoid having belting and shafting crossing the crane run, the main belt, which is sixteen inches wide and 170 feet long, passes underneath the shop



CROSS SECTION.

rect radiation, with seven lines of pipe under the windows in both floors, made up in sections of four and three, with manifolds so that steam can be admitted to either or both sections. This system was installed by the Walworth Construc-

floor. Fire protection is provided for by a complete system of the General Fire Extinguisher Co.'s automatic sprinklers. The storage building is 40x100 feet, built also by the Berlin Iron Bridge Co., and is of the same construction as the main

minated that all the buildings proposed, as well as the dock, could be constructed for the amount of the company's capital.

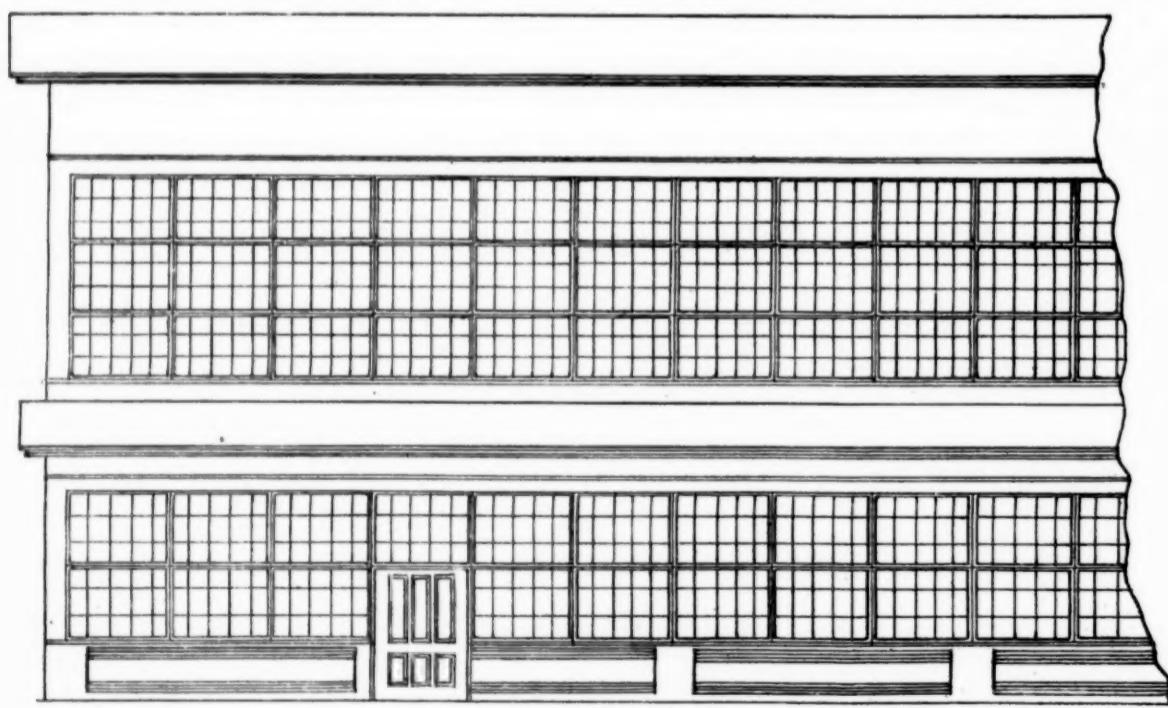
The Naval-Stores Season.

The naval-stores season at Savannah, which closed March 31, was the largest by far in the history of that market, and a further increase the coming year is very evident. It is expected that the increased production will affect the prices of the product.

The receipts of spirits turpentine up to the close of the season were 303,702 casks, against 268,309 casks for the preceding year, an increase of 35,393 casks for the year just ended. The exports were 300,960 casks, against 277,522 casks a year ago, an increase of 23,446 casks.

The receipts of rosin for the crop year were 1,143,026 barrels, against 993,134 barrels for the preceding year, showing an increase of 149,892 barrels. The total shipments were 1,097,328 barrels, against 1,013,831 barrels the preceding year, showing an increase of 83,497 barrels. The stock on hand and on shipboard is 134,978 barrels, against 89,280 on the same day last year.

The Southern Travelers' Railway Guide, edited and published by J. R. Watts, Atlanta, Ga., is an exhaustive directory of Southern railway timetables, connections, distances, hotel directory, and a select list of resorts, their attractions, how reached, and miscellaneous information for traveler and business office. With the March number the Guide begins its eleventh year, and is well worth the subscription price, \$2 per year, twenty cents per copy.



SIDE ELEVATION.

is occupied by the erecting shop, giving a space 305x40 feet, and all the heavy tools are here located in easy reach of the crane. This useful adjunct was made by the Morgan Engineering Co., Alliance, Ohio, and has a span of thirty-five feet,

tion & Supply Co., Boston. The lighting is by the incandescent system, a single light being located over each tool, and clusters of four and eight lights set on an angle on the level of the gallery floor to light the assembling-rooms.

building except that it is covered with corrugated iron, which in the event of its being used as a machine shop, could be easily taken off and brick walls of composite construction substituted. The floor of the shop is composed of five inches of

FINANCIAL NEWS.

New Corporations.

Business men of Emporia, Va., may organize a bank in that town.

J. W. Norwood, of Wilmington, N. C., and others are interested in organizing a new national bank at Goldsboro, N. C.

A charter has been granted to the Uniontown Mutual Fire Insurance Co., of Mountain Grove, Mo.; no definite capital stock. C. R. Hughes is president, and J. W. Newkirk, secretary.

The new bank to be opened at Burgin, Ky., is to have a capital stock of \$20,000. The following are the officers: T. O. Meredith, president; W. P. Burgin, vice-president; Ben. T. Head, cashier.

The Citizens' Bank, of Jonesboro, Ark., has been organized. Y. A. Cole is president, and, with O. McGowan, H. Watson, J. A. Adams and C. L. Kennard, constitute the board of directors. The capital stock is \$50,000.

A bank, to be known as the Bank of Grand Prairie, has been organized at Hazen, Ark., with a capital stock of \$25,000. The following were elected as directors: John Sims, president; A. F. Yopp, vice-president; J. E. Wooten, cashier; R. H. Toll, J. H. Sims, John Kocourek and Judge J. D. Collins.

The Twenty-Fifth German-American Building Association has been incorporated at Baltimore by Alexander Y. Dolfeld, William Schwarz, John Mahr, Daniel J. Emick, Jr., Albert H. King, George R. Willis, Frederick Faust, Gerhard Leimbach, Harry A. Remley and John R. Smith. The capital stock is \$2,080,000.

The new bank at Cameron, W. Va., has organized by electing the following board of directors: T. C. Pipes, John Hix, Warren Wilson, J. W. Dunlavy, H. Hix and James McVay. The board selected J. W. Dunlavy as president, and V. B. Williams, vice-president; William Vane, cashier. It will be ready by the 15th of April, with a capital stock of \$25,000, for a general banking business.

New Securities.

The Cruce Banking Co., of El Dorado, Mo., has increased its capital stock from \$12,000 to \$25,000.

An issue of \$250,000 in 5 per cent. equipment bonds of the Seaboard Air Line has been placed on the market by the Baltimore Trust & Guarantee Co. and the Mercantile Trust & Safe Deposit Co. of Baltimore.

The Maryland legislature has authorized the issue of \$500,000 in bonds to pay for the State penitentiary and \$100,000 in bonds for an insane asylum. Thomas J. Shryock, State treasurer, at Baltimore, may be addressed.

Interest and Dividends.

The National Marine Bank of Baltimore has declared a semi-annual dividend of 3 per cent.

The New Orleans Water Works Co. has declared a semi-annual dividend of \$2.50 per share.

The State Savings Bank, of Charleston, S. C., has declared a semi-annual dividend of 3 per cent.

The O'Neill Manufacturing Co., of Rome, Ga., has declared a dividend of 10 per cent. for the year.

The New Orleans & Carrollton Railroad Co. has declared a quarterly dividend of \$1.50 per share.

The Crescent City Stock Yards Co., of New Orleans, has declared a quarterly dividend of 1 1/4 per cent.

The American Tobacco Co. has declared dividends of 2 per cent. on its common and preferred stock.

The board of directors of the Old Town Bank, of Baltimore, has declared a semi-annual dividend of 4 1/2 per cent., payable April 13.

The Economy Savings Bank of Baltimore has declared an extra dividend of 1 1/2 per cent. in addition to its annual interest of 3 1/2 per cent.

The People's Bank, of Greenville, S. C., has increased its business to such an extent that its directors have determined to pay 2 per cent. quarterly dividends.

The following interest payments have been announced by Baltimore banks: Savings Bank of Baltimore, 3 1/2 per cent., annual; Economy Savings Bank, 3 1/2 per cent., annual; Hopkins Place Savings Bank, 3 per cent., annual; Eutaw Savings Bank, 3 per cent., annual; Maryland Savings Bank, 3 1/2 per cent., annual.

Financial Notes.

Mr. Robert K. Waring has been elected president of the Central Savings Bank of Baltimore.

A. Rice has been elected cashier of the Farmers' National Bank at Cynthiana, Ky., succeeding John G. Montgomery.

Lawrence B. Kemp has been elected president of the Commercial and Farmers' National Bank at Baltimore, and Wilson Keyser, cashier.

The April circular of Messrs. N. W. Harris & Co. contains an extensive list of bonds which this firm have placed on sale. They embrace choice securities from all sections of the country, and present excellent opportunities for investment. Messrs. Harris & Co. have offices at New York, Chicago and Boston.

The Fidelity & Deposit Co. of Baltimore has determined to establish a local board of directors at Atlanta on account of its extensive business at that point, and has selected the following: Robert J. Lowry, J. W. English, George W. Parrott, W. A. Hemphill, H. M. Atkinson, H. T. Inman and Isaac Liebmann.

The firm of Sperry, Jones & Co., of Baltimore, which succeeds R. B. Sperry & Co., as announced in the Manufacturers' Record last week, has issued a circular to its patrons and the investing public notifying them of the change. The circular says in part: "We make a personal examination of all our securities and employ the best legal and accounting talent to determine their value. We keep on hand an attractive line of bonds to which these tests have been applied and which we can commend to your confidence."

Being members of the Baltimore Stock Exchange, and represented by reliable correspondents in all the large centres, we are prepared to execute cash orders for the purchase and sale of securities; but we do not accept margin business."

The schooner Jennie S. Butler sailed from Port Tampa on the 2d inst. for Baltimore with 1440 tons of pebble phosphate from the Palmetto Phosphate Co. The British steamship Lemgo arrived at Port Tampa on the 2d inst., and the steamship Wydale on the 3d inst., both to load with phosphate.

The shipments of high-grade phosphate rock through the port of Savannah for the month of March, as reported by J. M. Lang & Co., were as follows: Steamships Henrietta H. for Aarhus, Denmark, 1405 tons, by J. E. O'Hearn; Turquoise for Hamburg with 1496 tons; Inverness for Stettin with 1467 tons, and Ferndene for Riga, Russia, with 1607 tons, by B. Arentz & Co.; Aberfield for Genoa with 1447 tons, by Gus Gudehus, and the Corona for Leghorn with 1095 tons, by Anglo-Continental Guano Works—total, 8517 tons.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., April 9.

The local phosphate market continues quiet, with no urgent demand at the moment. Manufacturers are not in the market, and the inquiry from out-of-town buyers is light. At mining centres in the South the development of phosphate rock shows more activity in certain directions, and the market is a shade firmer. In South Carolina there is a good domestic demand for rock, and prices at Charleston and at the mines are firmer. Crude rock is quoted at \$3 at the mines, hot-air-dried \$3.25 f. o. b. Ashley river and \$3.45 f. o. b. Charleston. The developments in the Florida mines are on a more extensive scale, and it is thought that shipments from the ports will be larger for the present month than for March. Prices are nominally firm, with a fair demand from foreign ports. The only arrival in the local market last week was the schooner Lida J. Lewis from Charleston with 850 tons of phosphate rock. There are no local charters reported. In New York business in sail tonnage does not increase, and the berth market shows no improvement. The following phosphate charters are reported: A schooner, 211 tons, from Philadelphia to Norfolk with phosphate at 80 cents; a British steamer, 1304 tons, from Port Tampa to Ghent with phosphate at 15/6. April; a schooner, 1019 tons, from Tampa to Norfolk and Richmond at \$1.85.

Fertilizer Ingredients.

During the past week the market for ammoniates has been quiet, with a moderate inquiry. Manufacturers are moving cautiously, and are not adding to their supplies except in special cases. The market in the West is steady, with stocks generally light. There is some inquiry from Southern markets, but the actual volume of business for the week has been light. Nitrate of soda in New York was a shade easier at \$1.67 1/2 from ship in ordinary quantities. Sulphate of ammonia is steady at quotations.

The following table represents the prices current at this date:

Sulphate of ammonia, gas...	\$2 40 <i>00</i>	—
Sulphate of ammonia, bone...	2 25 <i>00</i>	2 30
Nitrate of soda.....	1 75 <i>00</i>	1 80
Hoof meal.....	1 70 <i>00</i>	—
Blood.....	1 80 <i>00</i>	—
Azotine (beef).....	1 70 <i>00</i>	—
Azotine (pork).....	1 75 <i>00</i>	—
Tankage (concentrated).....	1 70 <i>00</i>	—
Tankage (6 and 20).....	17 70	17 50
Tankage (7 and 30).....	17 00 <i>00</i>	17 50
Fish (dry).....	20 50 <i>00</i>	—
Fish (acid).....	12 00 <i>00</i>	—

Phosphate and Fertilizer Notes.

The British steamship Ardrishaig was loading a large cargo of phosphate at the elevator in Fernandina on the 4th inst.

The French Phosphate Co. has shut down its plant at Luraville, Fla., for an indefinite period and discharged all its hands.

The British steamship Pocklington cleared last week from Savannah for Bremen with 1003 tons of phosphate rock and other cargo. The British steamship Glenvech arrived from Punta Gorda, Fla., with a part cargo of phosphate rock for Revel. She will finish loading with cotton for St. Petersburg and Norrkoping.

The Brunswick Terminal Co., of Brunswick, Ga., reports the shipments of high-grade Florida phosphate rock through that port for the month of March as follows: Steamship Inishowen Head, for Liverpool, England, by the Anglo-Continental Guano Works, 544 tons, and steamship Garlands, for Gulatz, by H. F. Dutton & Co., 2494 tons, being a total of 3038 tons; amount previously reported 4883 tons; total to April 1, 7921 tons.

The shipments of phosphate rock through the port of Punta Gorda for the month of March, as reported by Mr. Albert F. Dewey, were as follows: Steamship Gladiolus for Plymouth with 2227 tons; steamship Glewich for Riga, Russia, with 2650 tons; steamship Petunia for Harburg with 2290 tons, and schooner Helen G. Mosley for New Orleans with 837 tons, all by the Peace River Phosphate Manufacturing Co.; total 8004 tons, and amount previously reported 3751 tons, making a total for three months of 11,755 tons.

The following is a statement of the shipments of phosphate from Port Tampa for the month of March: Schooner Talofa for Cartaret, N. J., 1614 tons pebble; schooner C. S. Gildden for Baltimore, 1627 tons pebble; schooner J. R. Teele for Philadelphia, 1326 tons pebble; schooner Carrie A. Lane for Cartaret, 1260 tons pebble; schooner John K. Souther for Cartaret, 323 tons rock and 1156 tons pebble; British steamship Mab for Stettin, 2982 tons rock; schooner R. W. Hopkins for Cartaret, 1403 tons pebble, and schooner Mary Lee Patton for Baltimore with 831 tons, making a total of 12,522 tons.

The shipments of phosphate rock from the port of Charleston, S. C., to domestic ports for the week ending the 3d inst. were as follows: Schooner Fannie Brown, 775 tons, and schooner Mary Curtis, 525 tons, both to Richmond, Va.; the schooner Gertrude Abbott, 885 tons, cleared for Philadelphia; schooner James Boyce, Jr., for Cartaret, N. J., with 900 tons, and schooner J. W. Balano for Weymouth, Mass., with 900 tons. The total shipments of phosphate rock from Charleston to domestic ports since September 1, 1895, amount to 70,612 tons, against 53,854 tons for the corresponding period last year. The shipments of ground rock for the same period amount to 7927 tons, against 1365 tons last year.

The shipments of phosphate through the port of Fernandina, Fla., for March last were very satisfactory, having exceeded the estimates made at the beginning of the month. Twelve vessels cleared, taking as cargoes 24,182 tons. Nine of these were foreign steamships, eight British and one Norwegian. Three schooners took phosphate cargoes to American ports. With the exception of 4500 tons, all of the phosphate went to Germany and the Netherlands. The largest cargo was taken by the steamship Rockcliff, which sailed on the 25th for Stettin, Germany, with 3150 tons. The shipments for the month, as reported by the collector of customs, were as follows: March 2d—schooner Senator Sullivan for New York, 1007 tons; 10th—steamship Inishowen Head for Birkenhead, 1250 tons; 14th—steamship Bardentower for Hamburg, 1750 tons; 16th—steamship Dunmore Head for Dantzig, 2200 tons; 18th—steamship Fernland for Hamburg, 2700 tons; 21st—schooner Blanche Hopkins for Baltimore, 865 tons; 21st—schooner Isaiah Hart for Philadelphia, 1260 tons; 23d—steamship Durham City for Stettin, 2200 tons; 25th—steamship Rockcliff for Stettin, 3150 tons; 26th—steamship Beresford for Rotterdam, 2800 tons; 30th—steamship Manningham for Hamburg, 2500 tons, and steamship Marie for Stettin 2500—total 24,182 tons. The estimated shipments for April are 25,000 tons, with the following charters reported: B. Arentz & Co., steamships Royalist and Jessie; G. Gudehus, steamships Bendum, Oaklands and Glanayan; French Phosphate Co., steamship Airdrishaig; Pebble Phosphate Co., schooner Senator Sullivan; J. H. Packard, steamship Amyl, and Anglo-Continental Co., steamship Messina.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Lumber Directory.

Readers of the Manufacturers' Record who may be in the market for lumber of any description are recommended to the directory of Southern lumber manufacturers and dealers which appears among the advertising pages.

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,

Baltimore, Md., April 9.

With the advent of more favorable weather the local lumber market begins to show a better demand, and during the past week the volume of business has slightly improved. The stocks are all fully ample for present requirements, and receipts of yellow pine continue liberal, so that wharves and docks are piled up with a supply, the movement of which keeps prices down to rock bottom. The demand from builders and others is still light, but during the week has slightly improved. Planing mills are busy, and in this line there is some material selling. Kiln-dried North Carolina pine is in better demand, and from out-of-town there is a better inquiry and considerable business reported for the week. In white pine trade is quiet, with a moderate demand and stocks ample for all necessities. Cypress is quiet, with prices steady. The hardwood trade shows a slight improvement, and under more settled weather to facilitate transportation in the interior, business is expected to show more activity. There is very little local demand from any source, and from out-of-town buyers there is more inquiry.

The following list represents the prices current at this date:

(The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.)

VIRGINIA AND NORTH CAROLINA PINE

5-4x10 No. 2, kiln dried.....	\$16 000	18 00
5-4x12 No. 2, kiln dried.....	17 500	18 50
4-4x10 No. 1, kiln dried.....	15 500	17 00
4-4x12 No. 1, kiln dried.....	16 000	17 00
4-4 nar. edge, No. 1, kiln dried.....	13 500	14 50
4-4 wide edge, No. 1, kiln dried.....	17 500	18 50
6-4x10 & 12 No. 1, kiln dried.....	23 000	24 00
4-4 No. 1 edge floor, air dried.....	13 500	14 50
4-4 No. 2 edge floor, air dried.....	10 000	11 00
4-4 No. 1 12-in. stock, air dried.....	14 000	15 00
4-4 No. 2 12-in. stock.....	12 000	13 00
4-4 edge box or rough wide.....	8 500	9 50
4-4 edge box do. (ord. widths).....	7 500	8 50
4-4 edge box do. (narrow).....	6 500	7 50
4-4 12-inch or rough wide.....	9 500	10 00
4-4 narrow edge.....	6 500	7 50
4-4 wide.....	7 500	8 50
4-4x10-inch.....	8 000	9 00
Small joists, 2½-12, 14 and 16 long.....	8 500	9 00
Large joists, 3-16 long & up.....	9 000	10 00
Scantling, 2x3-16 and up.....	8 000	9 00

WHITE PINE

1st and 2d clear, 4-4, 5-4, 6-4 and 8-4.....	48 000	50 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	43 000	44 00
Good edge culls.....	14 000	15 00
Good stock.....	16 000	17 00

CYPRESS.

4-4x6, No. 1.....	20 000	21 00
4-4x6, No. 2.....	14 000	15 00
4-4x6, 10 feet, fencing.....	12 500	13 50
4-4x6, rough.....	9 000	10 00
4-4 rough edge.....	9 500	10 00
4-4 edge, No. 1.....	18 000	19 00
4-4 edge, No. 2.....	12 000	13 00
Gulf, 4-4, Nos. 1 and 2.....	28 500	30 00
Gulf, 6-4, Nos. 1 and 2.....	31 500	32 50

HARDWOODS—WALNUT.

5-8, Nos. 1 and 2.....	65 000	75 00
4-4, Nos. 1 and 2.....	80 000	90 00
5-4, 6-4 and 8-4.....	85 000	95 00
Newell stuff, clear of heart.....	85 000	100 00
Culls.....	20 000	30 00

OAK.

Cabinet, white and red, Southern, plain-sawed and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	30 000	34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 000	55 00
Culls.....	10 000	15 00

POPLAR.

Nos. 1 and 2, 5-8.....	24 500	25 50
Nos. 1 and 2, 4-4.....	28 000	30 00
Nos. 1 and 2, 6 and 8-4.....	32 500	33 50
Culls.....	13 000	16 00

SHINGLES.

Cypr., No. 1 h'nts, sawed, 6x20.....	7 2500	7 75
No. 1 saps, sawed, 6x20.....	5 500	6 50
No. 1 hearts, shaved, 6x20.....	6 500	7 50
No. 1 saps, shaved, 6x20.....	5 2500	5 50

LATHES.

White pine.....	2 700	2 75
Spruce.....	2 150	2 25
Cypress.....	2 150	2 25

Norfolk.

[From our own Correspondent.]
Norfolk, Va., April 6.

There has not been the active demand for lumber during the past month that was expected, and the general market at this and adjacent points is quiet for this period of the season. Manufacturers, however, are still hopeful, and look for an active demand later on. Shipments have been better than usual during the past ten days, and there are a number of inquiries daily which will result in considerable actual business. The mills are all running regularly, and stocks, though not excessive, are fully ample for the demand. There is a good demand for box lumber, while the upper grades are dull sale. Rough lumber is selling fairly well, with prices firm at quotations. Receipts of air-dried lumber are better, with prices well maintained. Planing mills are all running, and prices for dressed lumber are still very low, with no indication of an advance. The local demand from builders and others is good, as a number of buildings are in course of construction, and, with the various other enterprises on foot, a large amount of lumber is being sold. Among the new companies is the Pasquotank Lumber Co., just chartered, with its headquarters here. The capital stock of the company is to be not less than \$20,000 nor more than \$40,000. Henry A. Dodge, of Norfolk, is president; Henry Walke, vice-president; Geo. M. Scott, of Elizabeth City, N. C., secretary and treasurer. Mr. T. J. Neacy, of Milwaukee, Wis., and John L. Roper and W. B. Clark, of Norfolk, are among the directors. The new purchasers of the Port Norfolk Furniture Co. propose to start up shortly with a full force of men. Since the recent conflagration of fruit packages made by the Virginia Manufacturing Co. at Suffolk the output of the plant has been materially increased to re-energize and supply the demand. A temporary warehouse has been built. A permanent storage-house of large dimensions will be constructed in the near future. There is a free offering of tonnage at this port, and rates remain unchanged. A schooner was chartered in New York last week to load crossties at this port for Philadelphia at 14 cents; fertilizer out at \$1.

Charleston.

[From our own Correspondent.]
Charleston, S. C., April 6.

There has been a fairly active market at this port during the past week, and the demand for all desirable grades of lumber is steady. At all milling points adjacent to this city business is very satisfactory as to volume, while prices are firm, with no material advance. At Georgetown the mills are well supplied with orders. Large receipts of cypress timber are reported from the Santee river through the Mosquito creek canal, and a large number of rafts are on the way. The schooners Adele Ball and Nellie Floyd sailed from Georgetown last week for New York with full cargoes of lumber, and the schooner Edgar C. Ross with a cargo of railroad ties. The market here closes firm for well-manufactured stock, at the following figures: Merchantable, \$14 to \$16 for city-sawed, \$12 to \$14 for railroad; square and sound, \$9 to \$12 for railroad, \$8 to \$11 for raft; dock timber, \$14.50 to \$16.50; shipping, \$8.50 to \$10.50. Shingles are in good demand at \$5 to \$7 per thousand. Among the shipments reported are the following: Schooner Bertha for Philadelphia with 500,000 feet of lumber; for New York, schooner John R. Holliday with 300,000 feet; schooner Maggie M. Keogh, 545,000 feet; schooner Adele Thackera, 500,000 feet. The steamship Algonquin cleared with 80,000

feet of lumber and one car of shingles among her cargo. The total shipments of lumber from this port since September 1, 1895, amount to 41,504,844 feet to coastwise ports and 1,530,685 feet to foreign, making a grand total of 43,035,529 feet, against 40,270,601 feet for the corresponding period last year. Lumber freights are steady, with rates at \$4.62½ to \$5 to New York and Sound ports. A charter was reported in New York on the 3d inst. of a schooner, 383 tons, from Union Island to New York at \$4.50.

Pensacola.

[From our own Correspondent.]
Pensacola, Fla., April 6.

The volume of transactions in timber and lumber at this port during the month of March has been extremely gratifying to shippers and others engaged in this important industry. During the month of March forty vessels entered the port, with an aggregate tonnage of 37,265. There were cleared during the same period thirty-nine vessels, with a total tonnage of 34,495. The exports during the month consisted of 88,211 cubic feet of hewn pitch-pine timber, 10,682,000 superficial feet of sawn pitch-pine timber, 9,204,000 superficial feet of pitch-pine lumber, 1,964 cubic feet of hewn oak timber, 157 walnut logs and 104,000 superficial feet of poplar lumber. There is a strong improved tendency to prices in the timber market, and several lots of sawn timber have been sold during the past week on a basis of 11 cents. Holders of sawn timber are very firm in their views, and it is stated that there are parties at Brewton, Ala., who are holding some 30,000 pieces for higher prices. The various saw mills at Bagdad, Escambia, Milton and other points are all running at full capacity, and are well supplied with orders. At present there is an unusual number of full-rigged ships in the harbor, there being twelve, with an average tonnage of 1424—two of them showing tonnage, respectively, of 2061 and 1827. The business of the present month is expected to be of considerable volume, and during the past week the shipments have been very large. The freight market is steady, with a fair offering of tonnage; for the United Kingdom or Continent, 90/ to 92 6 for large and 95/ to 100/ for small vessels; River Platte, \$12 to \$12.50, \$2 form, and for Rio Janeiro, \$13.25 to \$13.50 net. The following charters were reported last week in the New York market: A bark, 750 tons, from Pensacola to Santos on private terms; a Norwegian bark, 633 tons, Pensacola to the United Kingdom or Continent with sawn timber, 97/6 if deals, and boards 100/; a Norwegian bark, 738 tons, Pensacola to Rotterdam with sawn timber, 97/6; a bark, 599 tons, Pensacola to Antwerp with and tort hewn timber, 97/6 and 31/6, respectively, option of the Baltic at 100/; a schooner, 442 tons, Pensacola to Philadelphia on private terms; a British steamer, 1970 tons, Pensacola to the United Kingdom or Continent with sawn timber, 95/ to 100/; and four British steamers, 1367, 1687, 1892 and 1922 tons, Pensacola to the United Kingdom or Continent with options, sawn timber, 95/ to 100/.

Fernandina.

[From our own Correspondent.]
Fernandina, Fla., April 4.

A very satisfactory volume of business has been transacted in nearly every department of the lumber industry of the port during the past month, and the demand for desirable grades of lumber is on the steady increase. The lumber shipments for the month aggregated 3,220,589 feet of lumber, distributed as follows: New York, 1,022,367 feet; Philadelphia, 734,549 feet; Boston, 479,000

feet; Port de France, 361,000 feet, and Port Spain, 623,673 feet. Among the miscellaneous shipments the schooner Eunice L. Crocker cleared with a cargo of 15,000 crossties for Boston. The steamship Colorado also took out 80,000 crossties. The shipments are only the beginning of a great industry which is being rapidly developed. The demand for ties which are being prepared for market in this section is quite active, and shippers find it difficult in some cases to fill promptly the orders coming to hand. Of shingles the shipments amounted to 250,000, while in cedar 174 cases were shipped. The steamship Colorado made her last trip on the 1st inst. from this port to New York, closing for the present the business of the Mallory Line here. The Colorado took out 125,000 feet of lumber, 100,000 shingles, 80,000 crossties and 174 cases of cedar, with other merchandise. It is rumored that a new line of steamers will be put on immediately to ply direct between here and New York. A class of heavier vessels and of greater carrying capacity will be used, thus giving to Fernandina a better steamship service than heretofore enjoyed. Among the vessels loading are the schooner Jennie S. Hall, with lumber, by Cooney, Eckstein & Co., and the schooner Robert A. Snyder, with shingles, by N. B. Borden & Co. Several schooners are expected soon, and among them the Three Sisters, which will be loaded with lumber at the Drew wharf. A bark, 445 tons, was chartered in New York on the 2d inst. to load lumber at this port for New Haven at \$4.62½.

Brunswick.

[From our own Correspondent.]

Brunswick, Ga., April 6.

Just at this juncture, when business here was increasing steadily and the month of March closing with the best record of shipments in the history of the port, we have been visited with a most disastrous fire, involving a loss of \$500,000. The Downing docks and yards, the Plant system docks, Scarlett, Brieswick and Hoyt warehouses and the Ocean Hotel were all destroyed. An immense amount of property, consisting of rosin, turpentine, cotton, crossties and other merchandise, was also consumed. The work of rebuilding commenced almost immediately, the Plant system going ahead to rebuild on better lines than before. Their loss is about \$50,000, fully insured. The material for rebuilding the Downing Company's dock has been ordered, and work has already commenced. It will also rebuild its brick supply warehouse. The smaller docks above Downing's will also be rebuilt, and when completed the entire 900 feet of burned wharfage will be replaced in good shape. In the meantime business is going on, with, of course, a slight interruption. The shipping record of this port for the month of March shows a volume of business amounting to \$982,864, and for the corresponding month in 1895 the shipments were \$753,998, an increase in one year of \$228,866. The lumber industry of the port for the month shows a very satisfactory business, the total exports amounting to 7,991,000 feet of lumber, 133,000 feet of timber and 83,025 crossties. Of the above amounts, 2,253,000 feet of lumber and 133,000 feet of timber were foreign shipments, while the balance went to coastwise ports. The business for April, as at present estimated, will be of considerable volume, as a number of vessels are expected to arrive, while a number are being chartered to load in April. The mills are all as busy as can be, working up to their full capacity, with orders coming in freely. The lumber business at Darien, Ga., is also quite active, and

crease. The supply of cypress logs at the cypress industry is on a steady increase, owned by the Hilton-Dodge Lumber Co., is large, amounting, it is said, to several million feet, all of which will be manufactured at their mills in Brunswick. Among the charters reported in New York on the 4th were the following: A bark, 613 tons, with lumber from Brunswick to Colon at \$7.50; a British bark, 1096 tons, from Brunswick to Santos with lumber at \$15 net, and a schooner, 1114 tons, from Brunswick to Boston with crossties at 13 cents.

Beaumont.

(From our own Correspondent.)

Beaumont, Texas, April 6.

The lumber market in this section has ruled very steady during the past week, and the volume of transactions at this point has been very satisfactory. The demand from points within the State is better than usual, and it is expected that a large amount of material will go into consumption during the present month. Yard stock has been moving very freely, and during the month of March it is stated that the shipments were 40 per cent. greater than the previous month. The Journal, in its review of the lumber situation, says: "The movement of yard stock continues active, and satisfactory additions have been made during the week to the orders already on hand. Business appears to be reviving at all points in the interior, as may be reasonably inferred from the several requests to hurry forward their bills of material. * * * There is a good supply of timber bills on hand, the bulk of which, however, are for the railroad building from this point." The demand for shingles is fairly active, with no change in prices. The export trade is in a healthy condition at the moment, and shippers are generally in good spirits. Visitors from Pensacola and Mobile have been looking over the situation at Sabine Pass, and with large interests in lumber and timber at the above points, they are seeking additional fields of operation, and it is likely that they will do some business through the Pass. The record for March shows that six vessels were cleared through Sabine Pass loaded with lumber, all destined for Mexican ports. The Lutcher & Moore Lumber Co. of Orange, loaded three of the vessels with lumber, aggregating 320,656 feet, and the Beaumont Mills the other three, with cargoes amounting to 1,413,079 feet. The total water shipments amounted to 1,733,735 feet. On the 2d inst. two vessels cleared from the Pass—the Iolanthe with 400,000 feet and the Thomas N. Stone with 298,000 feet for Tampico. These were loaded by the Consolidated Export and the Reliance Lumber Companies. Of prices and stocks at Orange, the Galveston News says: "Manufacturers are holding to list prices on lumber and shingles alike, and in lumber the stocks on each yard are as well assorted as the experience of the managers could suggest. There have been changes made in the character of lumber called for within the past few years, and on that account the trade took all and wanted more last season of several kinds that had heretofore been neglected. That feature will not appear in the coming demand, as the weak lines have been anticipated and fortified against by enlarging upon each class in yard stock or dimension where it could be done to strengthen the weak places, until the mills claim that there never has been a time when their yards were in better shape to deliver orders with promptness."

A Big Timber Sale.

A big deal in timber lands was effected in Baldwin county, Alabama, last week.

Mrs. L. A. Carney sold the big saw mill at Dolve and 40,000 acres of timber land to Mr. J. D. Hand, of Jamison, Ala., one of the largest timber manufacturers in the State, for \$90,000. Mr. Hand will proceed at once to extend and enlarge the plant, and, it is stated, will make it one of the largest in the South.

Lumber Notes.

It is estimated that over 100,000 logs have been gotten out on the recent rise in the Kentucky river.

The exports of wood and its product from the port of Baltimore during the month of March was 3,476,000 feet of lumber, 5258 logs of wood and 156,000 staves.

The saw mill of W. C. Thomas, near Sylvania, Ga., was burned on the 1st inst. The loss was total, there being no insurance, and estimated at several thousand dollars.

The bark Mathew Baird cleared last week from Wilmington, N. C., for Port Spain, Trinidad, with 250,273 feet of lumber, valued at \$2681 and shipped by Edward Kidder's Son.

The large planing and shingle mill of Mr. D. P. Everitt, of Statesboro, Ga., was burned on the 31st ult. Mr. Everitt carried no insurance on either building or machinery, and his loss is estimated at \$2500.

It is stated that a Chicago capitalist has about completed negotiations for the purchase of the entire plant of the Seaboard Manufacturing Co. at Fairford, Ala. The property is now in the hands of receivers.

The stave and heading factory at Salem, Va., has sold during the past winter over 25,000 barrels for apples. It has now on hand a stock of 500,000 staves, all of which are sold to Baltimore and Norfolk firms.

A new saw mill has just been finished and put in operation at Cocoanut Grove, Fla. Mr. M. Gardner, the superintendent, has a number of orders ahead for lumber, and for the next six months the mill will be run day and night.

Work was resumed on the 28th ult. at the extensive saw and planing mills of S. H. Berg, at Aberdeen, Miss., which were burned early in February, causing a loss of \$20,000, against an insurance of \$1500. The finest machinery manufactured is being placed in position to complete the plant.

Among the exports reported from Pensacola, Fla., during March last were 88,211 cubic feet of hewn pitch-pine timber, 10,682,000 superficial feet of sawn pitch-pine lumber, 1964 cubic feet of hewn oak timber, 157 walnut logs, 104,000 superficial feet of poplar lumber and five packages of woodenware.

The constwise exports of lumber from the port of Jacksonville, Fla., for the month of March amounted to 6,625,000 feet of yellow pine and 643,600 feet of cypress lumber, and foreign shipments 804,954 feet. There were also shipped to domestic ports 8,006,000 shingles and 18,000 crossties.

Messrs. Nelligan, Flannigan, Scott, Carney and Holmes, of Marinette, Wis., left their city last week for Louisiana and Mississippi to look over timber lands. They will make a personal inspection of lands which they have in view, and will undoubtedly make some extensive purchases before they return.

The Savannah Lumber Co.'s saw mills at Savannah were burned on the evening of the 6th inst. The mill, with its machinery and a considerable amount of lumber, is a total loss. There was no insurance on the mill or its contents, and

the loss is estimated at between \$10,000 and \$11,000.

The Basic City School & Furniture Manufacturing Co. was organized last week at Basic City, Va., with the following officers: J. F. Templeton, of Waynesboro, president; J. R. Kemper, of Fisherville, vice-president; George S. Magee, secretary; W. H. Lavell, treasurer. The company has ample capital, and proposes to run the plant to its full capacity.

The Benjamin Butter Dish Co., at Chattanooga, has leased the ground of the Chattanooga Co., Limited, at River-view, and will commence the erection of a handsome brick building at once. The company contemplates moving its South Chattanooga plant to that place as soon as possible. The company will add a dry-kiln and new machinery to its present extensive plant.

The lumber business at Darien, Ga., for the month of March was very satisfactory, and the market active, with values firm and hardening. On the 2d inst. there were twenty-three vessels in port loading lumber and timber. The shipments during March amounted to 14,012,562 superficial feet of lumber and timber, and it is stated that the April shipments will probably far exceed these figures.

The logs of the Johnson Lumber Co. and the Heyser Lumber Co., of Chattanooga, have been accumulating on the upper waters of the Tennessee for over a year, and there are now fully 6,000,000 feet of lumber ready for shipment to Chattanooga. On the arrival of the timber of the above companies, and with the stocks already on hand of other mills, the total quantity received will be the largest that has ever come out on the spring-logging tides.

The movement in timber and lumber at Mobile, Ala., was quite active last week, and the demand is steadily on the increase. The shipments of sawn timber amounted to 323,641 cubic feet, and of hewn 67,764 cubic feet, all for the United Kingdom and Continent. The demand for lumber was quite active, the shipments amounting to 1,539,520 superficial feet. The total shipments of lumber from the port of Mobile since September 1 amount to 37,807,037 feet, against 39,023,605 feet last year.

A charter was granted in Norfolk, Va., last week to the Pasquotank Lumber Co., which proposes to manufacture lumber of all kinds and also building material, etc. The capital stock of the company is to be not less than \$20,000 nor more than \$40,000. The principal office is to be in Norfolk, and the officers for the first year are as follows: Henry A. Dodge, of Norfolk, president; Henry Walke, of Norfolk, vice-president; George M. Scott, of Elizabeth City, N. C., secretary and treasurer. The above officers, with T. J. Nealey, of Milwaukee, Wis.; John L. Roper and W. B. Check, of Norfolk, constitute the board of directors.

The regular monthly meeting of the Arkansas Shingle Association and the Southern Cypress Association of Louisiana took place at Alexandria, La., on the 30th ult. At the joint session of the two associations E. P. Ladd, of Sherrill, Ark., was appointed chairman. It was demonstrated to the meeting that the shingle mills of the association made 35,000,000 shingles less for the three first months of this year than for the corresponding period of last year, and that there was 120,000,000 of shingles in stock on March 15 last and 210,000,000 in stock on the same date in 1895, showing a decrease of 90,000,000 shingles. Under these conditions it is stated that an advance in price will occur on the opening of the spring trade. A plan was pro-

posed to organize a stock company, with a capital stock of \$2,000,000, to market the entire product of Arkansas, Louisiana and Texas. The matter was referred to the executive committee for consideration and final report at the next meeting, to be held at Monroe, La., on the first Monday in May next.

Coal Development in Texas.

The importance of cheap coal in Texas cannot well be overestimated. A vast territory, with many natural advantages, but lacking at present the ability to secure fuel at a low cost, is retarded in its industrial development by this fact, everything tending to lessen the cost of fuel in Texas becomes, therefore, of wide interest. The Lone Star Coal Co., of Rockdale, in a letter to the Manufacturers' Record, says:

"In June, 1894, the Lignite Coal & Manufacturing Co. sunk a shaft thirty-six feet deep, and began working a vein of lignite about six feet thick and of medium quality. Owing to inexperience and poor ventilation, the mine took fire by spontaneous combustion in June, 1895. After spending a large sum, these people abandoned the mine in November, 1895. The president and secretary of the Lone Star Coal Co., being experienced miners, and having a knowledge of another vein of coal below this one, leased the burning mine in January of the present year, and by making the burning lignite manufacture carbonic-acid gas, soon extinguished the fire, and began to sink a deeper shaft, using the old one, machinery and tipple. At a depth of 105 feet we struck a vein of lignite containing about 73 per cent. of carbon, fixed and volatile, and only 12.09 per cent. of moisture, whereas the other lignites here contain 29 per cent. to 34 per cent. Being overlaid with nine feet of shale, the coal can be mined at a less expense than the upper veins, which are roofed with packed sand. The capacity at present is 200 tons daily, but will be increased when custom demands by sinking a larger shaft.

"We expect to demonstrate to railroad companies that by changing their locomotive fire-boxes and drafts, they can use this coal at a very great saving. They are now hauling bituminous coal from Arkansas and Indian Territory—a distance of over 500 miles, and paying \$2 to \$3.50 per ton at the mines, while we can sell at \$1 per ton f. o. b. at the mines and save them long hauls and transfers.

"The fuel question is keeping cotton mills and other manufacturing establishments out of Texas, but they need delay no longer, as the problem has been solved when they can get fuel at such low rates that has such a high calorific power as this vein of lignite."

Wise Men

read the advertising pages of the Manufacturers' Record carefully because they are always sure to find something of value; it may be a special sale, or an opportunity for investment, or some new machinery, or some one looking for a location for a factory, or a thousand and one things advertised that may concern you. Every man ought to *study* newspapers, not simply glance over them, but examine in detail the Manufacturers' Record, for instance, and he will be sure to find something that can be made profitable in his business. In its news columns and in its advertising pages he will find matter that may prove invaluable in his business operations.

The Savannah Construction Co. has elected the following officers: President, B. A. Denmark; vice-president, Gen. John Gill; treasurer, Herman Myers; secretary, E. L. Goodman.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

ALABAMA.

Anniston — Bottling Works.—Sam Rund and John Leyden have purchased machinery and equipped a bottling plant.

Anniston—Overall Factory.—L. H. Kaplan is in correspondence with New York parties who may possibly erect an overall factory in the South.

Dolive—Saw Mill and Timber Lands.—J. D. Hand, of Jenison, Ala., has purchased the big saw mill at Dolive and 40,000 acres of timber land for \$90,000. He will enlarge the plant and continue operations.

Jacksonville—Iron Mines.—C. P. Ball and associates are surveying a route to ore beds near Jacksonville, which C. D. Martin and associates will develop.

Newton—Lumber Plant.—W. W. Smith and others, of Alco, Ala., have incorporated the Smith-Dimnick Lumber Co., with a capital of \$50,000, to operate the Bloodworth plant.

Piedmont—Canning Factory.—W. C. Bentley and E. D. McClenen will form a company to establish a canning factory.

Selma—Pants Factory.—Ellisberg Bros. are receiving and placing in position the machinery for their jean-pants factory recently noted. About 100 hands will be employed.

Union Springs—Water Works.—Contract for the construction of the city water works has been awarded to Hebert & Lapeyre, of Chattanooga, Tenn.

ARKANSAS.

Dardanelle—Oil Mills.—The Arkansas Valley Cotton Oil Co. has been incorporated, with a capital stock of \$25,000, and Joseph Evans is president; John P. Hathaway, vice-president, and A. M. Scarborough, manager.

Donaldson—Lumber Plant.—The Clyde Lumber Co. has been incorporated, with a capital stock of \$10,000, and John W. Easley, president.

Hot Springs—Saw Mill.—T. W. Gibbs is rebuilding his saw mill of 20,000 feet daily capacity.

Little Rock—Telegraph Company.—The Postal Telegraph Co. has been incorporated, with a capital stock of \$1,000,000, to conduct telegraph lines, etc. Chas. P. Cumming is president; Wm. P. Davison, secretary, and George W. Clark, treasurer.

FLORIDA.

Green Cove Springs—Canning Factory.—The Green Cove Springs Manufacturing Co. noted last week, will establish a cannery.*

Key West—Electric-light Plant, etc.—The Tropical Electric Co. has been incorporated, with a capital stock of \$50,000, for operating electric plants, telephone lines, railways, etc. J. L. Watrous is president, and E. M. Martin, secretary-treasurer.

Pensacola—Paint Works.—Thomas J. Childerson has invented a paint to render wood proof against the teredo, and proposes forming a company to manufacture it. T. E. Welles and other Pensacola parties are interested.

Pensacola—Compress.—The Chamber of Commerce is making an effort for the establishment of a cotton compress.

GEORGIA.

Atlanta—Tinware Factory, etc.—Chas. A. Conklin, Raphael T. Semmes and John N. Goddard have formed a company and will establish a tinware and sheet-metal-goods factory.

Atlanta—Gas Plant.—The Atlanta Gas Co. will make some improvements to its plant at once.

Augusta—Compress.—The Consolidated Compress & Warehouse Co., recently noted, has decided to abandon its intended compress.

Austell—Cotton and Knitting Mills.—The establishment of cotton and woolen mills is talked of. C. J. Shelton can be addressed.

Bainbridge—Artesian Well.—The Flint River & Export Co. will bore an artesian well.*

Cornelia—Tannery.—J. C. McConnell has established a tannery.

Dahlonega—Gold Mine.—W. G. McNeely has struck a 12-foot vein in the Lockhart gold mine.

Fitzgerald—Telephone System.—The Colony Telephone Co. has been organized and will establish a telephone system. D. H. Ledbetter, of Cordele, is president; F. S. Bauder, vice-president, and A. T. Curry, secretary.

Palmetto—Cotton Mill.—A movement is on foot for the erection of a cotton mill, and J. T. Beckman can be addressed for information.

Savannah—Lampblack Factory.—The Seeman Manufacturing Co. (not Seeman, Floyd & Co., as stated last week,) is erecting a new factory.

Statesboro—Planing Mill.—D. P. Averitt will rebuild at once his planing mill.*

Valdosta—Guano Company.—B. P. Jones and associates have incorporated the Valdosta Guano Co., with a capital stock of \$60,000, for manufacturing, etc.

KENTUCKY.

Harrodsburg—Bridge.—Address James L. Neal for information regarding proposed steel bridge.

Henderson—Stemmer.—The American Tobacco Co. will enlarge its stemmer, adding a building 14x274 feet in size.

Marion—Electric-light Pant.—R. E. Bigham will doubtless erect the electric-light plant recently noted.*

Shelbyville—Cold-storage Plant.—The Frank Fehr Brewing Co. has completed arrangements for the erection of a cold-storage plant.

Wickliffe—Woodworking Factory.—C. F. Cauley, of Wisconsin, will erect a bent-wood works and shingle factory in Wickliffe.

LOUISIANA.

Alexandria—Cooperage Plant.—The Alexandria Cooperage Co., lately noted, is now erecting its plant, to have daily capacity of 1200 barrels and employ seventy hands.

New Orleans—Cocoanut Factory.—The Columbia Cocoanut Desiccating Co. has been organized, with a capital stock of \$50,000, to establish a desiccating plant. John B. Cefalu is president, and Charles Roth, secretary.

MARYLAND.

Baltimore—Packing Company.—William Falt and associates have incorporated the William Falt Co. for the purpose of packing oysters and fruit, capital being \$70,000.

Baltimore—Silver Smithery, etc.—The James R. Armiger Co. has been incorporated, with a capital stock of \$50,000, for conducting a silver smithery, etc.; Incorporators, John W. Sills, Louis P. Mass and others.

Baltimore—Cracker Factory.—David M. Laws, Chas. E. Laws and associates have incorporated the Baltimore Biscuit Co., with a capital stock of \$50,000, to manufacture crackers, biscuits, etc.

Baltimore—Brick Works.—Kerner F. Brown and associates have incorporated the

Riverside Brick Co., with a capital stock of \$20,000.

Brooklyn—Electric-light Plant and Water Works.—John H. Geis and associates have obtained charter and will erect an electric-light plant and construct water works. Artesian wells and standpipe is proposed for water supply.

Cumberland—Steam-cleaning Plant.—C. W. Hinze will establish a steam carpet-cleaning plant.

Cumberland—Trunk Factory.—N. S. O'Neal has invented a cylindrical trunk, and company may be formed to manufacture it.

Drum Point—Docks, Wharves, Machine Shops, etc.—The Baltimore & Southern Railroad Co. will expend about \$75,000 for docks, wharves, two machine shops, etc., at Drum Point; Frank R. Bledler, of Baltimore, president.

Govanstown—Electric-light and Water Works.—A company will be incorporated to construct the water works lately noted. A canvass for subscriptions will be made at once; cost of plant estimated at \$40,000. Electric-light plant is also contemplated. Lawrence B. McCabe and associates are interested.

Hagerstown—Silk Mill.—A. P. Connor has purchased the Maryland Silk Mills for \$5300.

Washington, D. C.—Brick Works.—The Morrison Brick Co. has been incorporated for manufacturing brick, with a capital stock of \$25,000, and William Morrison is president.

MISSISSIPPI.

Greenville—Electric-light Plant.—J. B. Gabury & Co. have purchased and will remodel the Greenville electric-light plant.

Greenville—Laundry.—A company will be organized to establish a steam laundry. The Mittinger-Watson Co. can be addressed.

McComb City—Shirt-waist Factory.—D. C. Leveson and John Berschel have signed contracts with Hackett & Sharp for the erection of a shirt-waist factory, to employ fifty hands at the start.

Shannon—Woodworking Factory.—Hester & Abernethy will establish a plant for general woodworking.*

MISSOURI.

Chillicothe—Hardware Company.—Fred. B. Hoppe and others have incorporated the Hoppe-Taylor Hardware Co., with a capital stock of \$10,000.

Columbia—Sewers.—The city contemplates the construction of sewers. Address the street commissioners.

Kansas City—Printing Company.—J. H. Ramsey and associates have incorporated the Ramsey Printing Co., with a capital stock of \$3000.

Oregon—Water Works.—The city has voted an expenditure of \$25,000 for the construction of water works. Address the mayor.

St. Louis—Sewing-machine Company.—H. A. Geitz and associates have incorporated the J. C. Geitz Sewing Machine & Furniture Co., with a capital stock of \$20,000.

Thayer—Cannery.—T. E. Taber and others have incorporated the Thayer Canning Co., with a capital stock of \$2000.

Westport—Water Works, etc.—The city will hold an election April 21 to decide as to the issuance of bonds for \$50,000 to extend the water system. Address the mayor.

NORTH CAROLINA.

Ayer—Lumber Plant, etc.—L. White, of Indiana, has purchased 5000 acres of timber land near Ayer, and will erect a large plant for manufacturing lumber, etc.

Charlotte—Sign Factory.—The sign factory noted last week will be operated by Messrs. Dahlborn & Kuester. The firm will make a hollow raised aluminum letter, turning out about 3000 daily, with machinery specially designed and built by the Park Manufacturing Co., of Charlotte.

Charlotte—Cigar Factory.—Exline & Herzing, of Baltimore, Md., will establish a cigar factory in the Arlington Hotel building, Charlotte, to work fourteen hands at the start.

Greenville—Electric-light Plant.—S. C. Hamilton has commenced the establishment of his electric-light plant.

Greenville—Water Works.—The city council has appointed a committee to investigate as to the cost of water works. Address the mayor.

Rocky Mount—Water Works.—The Board of Trade can be addressed for information regarding proposed water works.

SOUTH CAROLINA.

Allendale—Cotton Mill.—A movement is on foot for the erection of a cotton mill. Paul Zeigler and G. P. Allen are interested.

Cheraw—Cotton-goods Factory.—E. A. Palmer, of Providence, R. I., will establish in Cheraw a factory for braided rope, flat and round corset strings, lamp wicks, etc.

Cheraw—Tannery.—A tannery may possibly be established. Address H. W. Finlayson.

Laurens—Water Works.—The city will probably hold an election in the near future to decide as to proposed issuance of \$40,000 in bonds for water works. Address the mayor.

Mayesville—Warehouse.—A. A. Staines is trying to form a company to erect a \$50,000 warehouse.

Spartanburg—Cotton Mill.—The new cotton-mill company of R. Z. Gates, noted last week, has been incorporated as the Arkwright Mills, with capital stock placed at \$200,000.

Sumter—Knitting Mill.—A movement has been started for the erection of a knitting mill.

Wedgefield—Water Supply.—The citizens will sink an artesian well for water supply.

TENNESSEE.

Chattanooga—Packing-house.—G. W. Meyer, of Cincinnati, Ohio, contemplates the establishment of a packing-house.

Harriman—Soda-water Factory.—George Henry will establish a plant for manufacturing temperance drinks; machinery purchased.

Knoxville—Brick Works.—James Girvin & Son will equip a steam brick-making plant.

Knoxville—Gum Factory.—The Walla Walla Chewing Gum Co., of Middleborough, Ky., will remove its factory to Knoxville.

Memphis—Box Factory.—The Anderson-Tully Company will rebuild at once its burned box factory.

Owend—Flour Mill.—Jno. W. Russell will erect a flour mill of fifty barrels daily capacity; steam plant and building now ready. Address Mr. Russell at Nashville, Tenn., Box 322.*

Pocahontas—Lumber Plant.—The Pocahontas Lumber Co. will shortly put in a 125 horse-power engine and boiler for general planing and woodworking.

Sherwood—Lime Works.—The Georgia Lime & Manufacturing Co. has added recently two large kilns.

TEXAS.

Calvert—Coal Mining, etc.—The Calvert Coal & Clay Co., reported last week, has its coal mines already in operation; capacity to be 3000 tons by September next. It will be some months before the company will develop its clay business, but ultimately the clay business will be the larger of the two departments.*

Colorado—Oil Mill.—A movement has been started for the erection of a \$40,000 cotton-seed-oil mill.

Dallas—Publishing Company.—Alex. E. Sweet and associates have incorporated the Texas Sifter Publishing Co., with a capital stock of \$10,000.

Dublin—Mercantile.—C. H. Latham and associates have incorporated the Dublin Mercantile Co., with a capital stock of \$10,000.

El Paso—Ice Plant.—The Consumers' Ice & Cold Storage Co. has been incorporated to operate the ice plant recently noted; Richard Caples and others, incorporators; capital stock \$30,000.

Gainesville—Cotton Mill.—The cotton-mill project is progressing. W. T. Roberts can be addressed.

Galveston—Mercantile.—James Cross and associates have incorporated the Cross Grocery Co., with a capital stock of \$10,000.

Houston—Lighting Plant.—J. D. McGregor and associates have incorporated the Texas Automatic Light Co., with a capital stock of \$50,000, to manufacture and supply light

to cities by a system of hydro-carbon lighting.

Laredo—Tannery.—The new tannery company, noted last week, has incorporated as the Villegas Tanning & Leather Goods Co., with capital stock placed at \$30,000, the incorporators being Messrs. Daniel Milmo, Quintin Villegas and Jonquin Villegas; Q. Villegas, president.

Lockney—Cannery.—The Lockney Canning Co. has been organized to establish a canning factory.*

Palestine—Water Works.—The Palestine Water Co. contemplates the erection of filters and other improvements.

Rockport—Brick Works.—B. F. Moss and L. P. Merrill have established brick works.

San Antonio—Candy Factory.—Max Kalski and others have incorporated the Bee Candy Manufacturing Co., with a capital stock of \$10,000.

San Antonio—Publishing Company.—J. H. McLeary and associates have incorporated the Docket Publishing Co., with a capital stock of \$1000.

Vernon—Mercantile.—Robert Houssels and others have incorporated the Red Store, with capital stock of \$10,000.

Wolfe City—Electric-light Plant.—A movement is on foot for the establishment of an electric-light plant.

VIRGINIA.

Basic City—Furniture Factory.—The Basic City School Desk & Furniture Manufacturing Co. has been reorganized, with a paid-up capital stock of \$70,000, to put in operation the Basic City school-desk factory. J. F. Templetton is president; W. H. Lavell, treasurer, and Geo. S. Megee, secretary and superintendent.

Blacksburg—Brick Works.—D. O. Matthews will establish a brick plant.

Coan—Canning Factory.—Thos. H. Fallin is equipping a plant for canning.*

Glasgow—Cement Works.—The cement works recently noted are now in course of erection, and will have a daily capacity of 300 barrels; to be driven by a 100 horse-power engine. C. H. Locher & Co. are the proprietors of the plant.*

Greenville—Telephone Line.—A company has been formed to establish a telephone line; John Towberman, president, and H. C. Palmer, secretary.

Holcomb's Rock—Aluminum Plant.—The Wilson Aluminum Co. of Leaksville, N. C., will erect a \$30,000 plant at Holcomb's Rock.

Neapolis—Varnish Factory.—A New York varnish manufacturer has made a proposition to the Business Men's League for the formation of a \$40,000 company to erect a varnish plant.

Norfolk—Lumber Manufacturing.—The Pasquotank Lumber Co. has been incorporated, with a capital stock of \$40,000, and Henry A. Dodge, of Norfolk, is president, and Geo. M. Scott, of Elizabeth City, N. C., secretary.

Norfolk—Mercantile.—The John H. Day Co. has been incorporated for mercantile purposes; capital stock \$10,000.

Norfolk—Steel Dock and Marine Repair Plant.—It is proposed to organize the Norfolk Docking, Shipbuilding & Machine Co., with a capital stock of \$500,000, for the purpose of erecting and constructing an off-shore floating dock of steel, and marine repair plant to work in connection therewith. Frank B. King has prepared general plans and estimates on such a plant. For further particulars address J. P. Andre Motte, Norfolk, Va.

Richmond—Pickling-house.—Johnson Bros. & Co. have incorporated, with a capital stock of \$25,000, to conduct a pickling business; W. J. Young, president.

Roanoke—Mining, etc.—The Chester Mining & Manufacturing Co. has been incorporated, with a capital stock of \$100,000, for mining and other purposes; W. H. Sproul, president, and J. T. Sampson, manager.

Stanley—Manganese Mines.—A Pennsylvania syndicate has leased the Eureka Manganese Co.'s mines.

WEST VIRGINIA.

Grafton—Steam Laundry.—F. B. Blue will establish a steam laundry.

Martinsburg—Electric-light Plant.—The Martinsburg Electric Co. has been organized to succeed the Edison Electric Illuminating Co.; W. W. Houseworth, secretary and manager; capital stock \$50,000.

Parkersburg—Tool Works.—John Carothers, of Bradford, Pa., manufacturer of oil-well finishing tools, contemplates establishing a plant in Parkersburg.

Point Pleasant—Brick Works.—C. F. Hesse and James L. Neighbors will establish a brick-making plant.

Wheeling—Camera Factory.—E. R. Buillard intends to form a company to engage in the manufacture of a hand photograph camera which he has perfected.

Wheeling—Oil Wells, etc.—A charter has been granted to the Spriger Oil & Gas Co., with a capital stock of \$50,000.

BURNED.

Charlottesville, Va.—The Vandegrift Construction Co.'s woodworking factory, and John L. Walters' flour mill; loss about \$20,000.

Franklin, N. C.—The Macon county jail.

Greenville, Miss.—The Planters' Oil Mill has been damaged by an explosion to the extent of \$30,000.

Savannah, Ga.—The Savannah Lumber Co.'s mill; loss about \$11,000.

Saxe, Va.—D. C. Jeremy's saw and grist mill; loss \$10,000.

Sylvania, Ga.—W. C. Thomas's saw mill. Travelers' Rest, S. C.—R. W. Anderson's distillery.

Vale Mills, Tenn.—J. B. Boyd's flour mill.

BUILDING NOTES.

Albany, Ga.—Church.—Contract has been let to Mr. Smith, of Sparta, Ga., for the erection of a \$15,000 church in Albany after plans by Mr. Lockwood, of Columbus.

Atlanta, Ga.—Jail.—The county commissioners have called for new plans on the proposed \$200,000 jail.

Atlanta, Ga.—Natatorium.—John Rice will erect an auditorium at a cost of about \$10,000.

Augusta, Ky.—School.—The public school trustees will contract for the erection of a \$12,000 school.

Austin, Texas—Theatre.—Lewis Hancock is advertising for bids on the erection of the opera house lately noted; plans by Gordon & McDonald.

Brunswick, Ga.—Docks, etc.—The Downing Company will rebuild its stores and docks.

Burke, Ky.—Bank Building.—The Farmers' Deposit Bank will erect a building.

Chattanooga, Tenn.—Residence.—O. F. Fouts will remodel his dwelling, at a cost of \$5000.

Dillon, S. C.—Warehouse.—D. M. Carmichael and associates have incorporated the Dillon Warehouse Co., with a capital stock of \$4000, to establish tobacco warehouse, etc.

Fitzgerald, Ga.—Hotel, etc.—P. H. Fitzgerald has received the plans for the proposed hotel and business-house; to be of brick, with stone foundation, three stories high; lower floor to have seven large store-rooms, and the remainder to consist of 11 rooms for hotel.

Glasgow, Ky.—Courthouse.—A new courthouse will be built at once. Address Judge Bohannon.

Jacksonville, Fla.—Armory.—Plans by A. S. Elchberg, of Savannah, Ga., have been accepted for the proposed armory; to cost about \$25,000. Address the building committee of the county commissioners.

Lynchburg, Va.—College.—The Randolph-Macon College will erect a \$15,000 addition to the Lynchburg buildings.

Memphis, Tenn.—Temple.—The I. O. O. F. has awarded contract to L. P. Hazen & Co., of Cincinnati, Ohio, for the erection of a new temple, at \$40,000.

Monroe, La.—Church.—St. Matthew's congregation has purchased site at \$6000 for the erection of a \$40,000 church.

Nashville, Tenn.—Contract has been let to Laurent & Pearcey for the erection of the Agricultural Building for the Tennessee Centennial; cost to be \$18,700.

Newport News, Va.—Hotel.—Contract for the erection of a hotel at Buckroe Beach has been awarded to E. Hart, of Norfolk, at \$18,888.

Norfolk, Va.—Church.—St. John's Church will erect a new structure, to cost over \$10,000. Address the pastor.

Roanoke, Va.—Office Building.—The Norfolk & Western Railroad has awarded contract to John P. Pettyjohn & Son, of Lynchburg, for the rebuilding of the office building recently burned; to cost \$125,000 and cover 188x65 feet.

Roland Park, Md.—Church.—Wyatt & Nolting, of Baltimore, are preparing plans for a M. E. church (stone).

Rutherfordton, N. C.—Brick Block.—Geo. H. Mills & Son will erect a brick block 50x100 feet.

San Antonio, Texas—Hotel.—Isaac S. Tay-

lor, of St. Louis, Mo., will prepare plans for the hotel proposed by H. D. Kampmann.

San Antonio, Texas—Hotel.—H. D. Kampmann has made a proposition for the erection of a hotel, to cost several hundred thousand dollars.

Savannah, Ga.—Orphanage.—The U. S. Union Association is raising funds for erecting an orphanage; A. S. Cooper, colored, president.

Southern Pines, N. C.—Dwellings.—James Tufts, of Boston, Mass., will erect thirty dwellings at Pinehurst.

Staunton, Va.—Store.—George Schmid will entirely rebuild his store building, three stories high.

Union, S. C.—Office Building.—M. F. Farr will receive bids until April 10 for erection of bank and office building; plans by C. C. Hook, of Charlotte, N. C.

Washington, D. C.—Dwellings.—Rufus A. Stuarts will erect a \$2400 dwelling, and S. B. Priest two dwellings to cost \$15,000.

Washington, Ga.—School.—The city will hold an election May 1 for the issuance of bonds in \$15,000 for the erection of a school. Address the mayor.

Washington, D. C.—Stores, etc.—Minnis & Martin have obtained permit for the erection of two stores, to cost \$4200; Francis Petrola for store and apartment, to cost \$8000.

Waynesboro, Va.—Hotel.—W. C. McDowell, of Richmond, and associate will make extensive improvements to the Brunswick Hotel.

Westport, Mo.—Engine-house.—The city will hold an election on April 21 for the purpose of deciding as to issuing \$20,000 in bonds for engine-house, etc. Address the mayor.

Winston, N. C.—School.—Contract for the erection of the \$10,000 school for the Moravian Church has been let to Fogle Bros.

RAILROAD CONSTRUCTION.

Steam Railways.

Alexandria, Va.—It is stated that the Eastern Midland Company has secured a charter in Virginia to build and operate a railroad, with capital stock of \$15,000,000. Incorporators are L. T. Michener, John L. Roper, T. S. Garnett and Jas. W. Wilcox, of Norfolk, Va.

Aransas Pass, Texas.—The surveyors on the route of the Aransas Harbor & Northern road are now running lines in Guadalupe county. It is stated that the company will be ready to let contracts for this road, which is to be about 140 miles long, as soon as surveys are completed. W. B. Brooks, 21 Gay street, Baltimore, may be addressed.

Aransas Pass, Texas.—Contractor J. P. Nelson has completed about three and one-half miles of the Aransas Harbor Terminal road. Secretary T. B. Wheeler, of the company, has received permission to sell \$250,000 in bonds, which will complete the line.

Baltimore, Md.—The title of the Baltimore & Drum Point Company has been changed to Baltimore & Southern. It is stated that Western parties have become interested in the line, and that it may be completed from Millersville, Md., to Drum Point, on the Chesapeake bay. This section of the road, which is sixty miles long, is graded. Frank R. Biedler, Equitable Building, is vice-president.

Christiansburg, Va.—The Blacksburg Railway Co., incorporated to build a railway from Christiansburg to Blacksburg, has a capital stock of \$100,000. The incorporators are Alex. Black and J. M. McBryde, of Blacksburg; A. A. Phlegar, Christiansburg, Va., and W. H. Palmer and A. L. Boulware, Richmond, Va.

Columbus, Ga.—It is again reported that the Georgia Midland & Gulf will be extended from McDonough to Atlanta, making a direct line from Columbus to Atlanta. Among those interested in it are R. A. Lancaster and William H. Palmer, of Richmond, Va., and J. F. Flounoy, of Columbus.

Danville, Va.—Prest. T. B. Fitzgerald, of the Dan River Power Co., advises the Manufacturers' Record that the Danville & Riverside road, although chartered to extend to the Virginia line, for the present will be constructed only to the company's power site, four miles from Danville. Work on it has begun.

Du Pont, Ga.—It is reported that a plan is being promoted to build a road from Du Pont to Fitzgerald. The distance is about sixty-five miles.

Fayetteville, Tenn.—General Manager C. P. Perin, of the Cumberland Construction Co., writes the Manufacturers' Record that the company has contracted to build thirty-

two miles of the proposed line from Fayetteville to Huntsville, Ala. A contract may be let for another section of road later. Mr. Perin's address is Birmingham, Ala.*

Fort Smith, Ark.—The Fort Smith & Western Coal Railway Co. has begun grading a portion of its proposed road. E. J. Crandall, at Fort Smith, is the principal promoter.

Fort Smith, Ark.—John O'Leary, of the Cherryvale Construction Co., Cherryvale, Kans., has secured the contract for building about twenty miles of the Fort Smith & Western Coal Railroad Co.'s road. (A letter care of Grand Central Hotel will probably reach him; also F. W. Bond, the engineer.)

Gainesville, Texas.—J. M. Lindsay, president of the Gainesville, McAlester & St. Louis Company, is now negotiating bonds for money to build the line to South McAlester, I. T.

Galveston, Texas.—The Texas City Terminal Railway Co. is constructing yards and terminal tracks at Texas City, on Galveston bay, and is purchasing 65-pound rails for this purpose. The Texas City Company's office is 524 Tremont street, Galveston, Texas.

Georgetown, Texas.—It is reported that the Missouri, Kansas & Texas may secure control of the Trinity, Cameron & Western (uncompleted) line and extend it to Austin. Henry C. Rouse, at St. Louis, is president of the M. K. & T.

Harriman, Tenn.—It is stated that the Tennessee Central has 860 men at work on the line between Harriman and the western terminus.

Lewisburg, W. Va.—The corporation is to vote on the question of issuing \$13,000 in bonds to aid the proposed railroad from Ronceverte to Lewisburg. W. D. McNaull, of Ronceverte, is interested.

Marksville, La.—The St. Louis, Avoyelles & Southwestern has been completed to Marksville. F. M. Welch, of Alexandria, La., is president.

New Orleans, La.—The Southern Pacific Company has asked for a franchise to build additional sidings and other tracks in the city. A. C. Hutchinson, at New Orleans, may be addressed.

Pinebloom, Ga.—The company in which B. B. Gray and others, of Pinebloom, are interested has applied for a charter under the title of the Fitzgerald, Pinebloom & Valdosta Company. It intends building from Fitzgerald to Valdosta, seventy-five miles. The capital is to be \$150,000, and the main office, Pinebloom.

Quitman, Ga.—The South Georgia Railroad Co. states that it has begun constructing its line from Quitman to a connection with the Georgia Southern & Florida. The first section of the road is to be built from Quitman to Little River.

Sedalia, Mo.—It is reported that the Sedalia, Warsaw & Southwestern, extending from Sedalia to Warsaw, Mo., forty-two miles, is to be changed from narrow to standard gage. T. F. Mitchum, at Sedalia, is receiver.

South McAlester, I. T.—The Choctaw, Oklahoma & Gulf, it is reported, will build a branch from Western Junction, I. T., to a connection with the Kansas City, Pittsburg & Gulf. Francis L. Gowen, 420 Walnut street, Philadelphia, is president.

Way Cross, Ga.—It is reported that the Way Cross Air Line may be extended from Nichols to Fitzgerald, thirty-five miles. L. Johnson, at Way Cross, is general manager.

Weatherford, Texas.—The Chicago, Rock Island & Texas Company has begun surveying its branch from Bridgeport to Weatherford. The road is to be about fifteen miles long. Henry Warren, of Weatherford, is president of the local company promoting the extension.

Electric Railways.

Greenville, Miss.—It is stated that J. A. Gabury & Co. have arranged to construct an electric street railway in the city.

Key West, Fla.—The Tropical Electric Company has been formed by J. L. Watrous, J. M. Phipps and E. M. Martin, all of Key West, to build an electric road from Key West to Miami along the Florida Keys. The line is calculated to be 150 miles long. The company also proposes building a trolley line in Key West.

Richmond, Va.—Treasurer S. H. Pulliam, of the Fairmount Traction Co., writes the Manufacturers' Record that contracts have been let for building its road.

Stewartstown, Md.—A company is to be organized under the title of the Stewartstown & Delta Railroad Co. to build a trolley line between these points. The distance is seventeen miles.

Washington, D. C.—The Senate has granted the Capital Traction Co. a fran-

chise to build a line from a point on the Potomac river through 11th, M, Monroe and other streets. The underground conduit is to be used within the city limits. (Officers at present unknown.)

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler. See "Canning Machinery."

Boiler, etc. Sealed proposals will be received until April 20 for the furnishing and putting in place complete new boiler and repair work in lighthouse tender Arbutus; specifications now on hand; James B. Quinn, U. S. A., New Orleans, La.

Boiler and Engine. — Harry Wadham, Braidentown, Fla., wants a fifty horse power engine and boiler.

Box Machinery. — G. Herbert Jackson, Augusta, Ga., wants to correspond with manufacturers of box machinery.

Bridge. — Bids will be opened May 6 at Hawkinsville, Ga., for the construction of iron and steel viaducts to west side approaches in lieu of present wooden bridge; total length of approaches 400 feet; bids wanted on 200 feet, with privilege of whole length. Address P. F. McGriff.

Bridge. — Sealed proposals will be received until May 6 for the construction of a bridge complete over Beachtree creek, after plans and specifications by Grant Wilkins, engineer. Address, for particulars, Anton L. Kontz, clerk to commissioner of roads and revenues, Atlanta, Ga.

Canning Factory. — The Lockney Canning Co., Lockney, Texas, wants estimates on cost of machinery for canning, evaporating, etc.

Canning Factory. — The Green Cove Springs Manufacturing Co., Green Cove Springs, Fla., wants estimates on canning factory of about \$4000 to \$5000 cost.

Canning Machinery. — A. J. Patrzek, Knoxville, Tenn., wants a horse-radish grater which feeds itself, potato slicer for Saratoga chips, and boiler for same.

Canning Machinery. — Thomas H. Fallin, Coan, Va., will need five crates, crane, exhaust outfit, scalding, bucking foot filter, gasoline outfit and hand capper.

Creamery Machinery. — J. E. H., Box 9, Waynesville, N. C., wants to correspond with manufacturers of creamery machinery.

Electric-light Plant. — R. E. Bligham, Marion, Ky., wants estimates on complete outfit for electric-light plant.

Electric Machinery. — Wm. E. Brunit, Dayton, Tenn., will want electric machinery soon.

Engine (Marine). — The Tar River Oil Co., Tarboro, N. C., is in the market for a new or second-hand compound non-condensing engine (marine), to equal in power at 150 pounds boiler pressure of 9x9 simple engine.

Excelsior Machinery. — The Piedmont Mat-tre & Excelsior Co., High Point, N. C., wants second-hand excelsior machinery.

Flour Mill. — Jno. W. Russell, Box 332, Nashville, Tenn., wants to buy machinery for 50-barrel flour mill (except steam plant and building).

Gas Engine. — C. H. Weber, Linden Springs, New Freedom, Pa., wants a two to four horse-power gas engine, second-hand; must be in good condition and at a reasonable price.

Grinding, Crushing, etc., Machinery. — The Allen Tripoli Co., Racine, Mo., wants machinery for grinding, crushing and bolting tripoli.

Grinding Machinery. — C. H. Loche & Co., Glasgow, Va., want to buy several pairs of good second-hand 4½-foot French burr stones for grinding cement and plaster.

Lumber-plant Supplies. — J. T. Finley, Jr., North Wilkesboro, N. C., wants a stump puller.

Machine Tools. — J. Lenfesty, Tampa, Fla., wants a second-hand cylinder scraper, or the iron work to put together.

Machine Tools. — The Lum Machinery Co., Montgomery, Ala., is in the market for a new or second-hand press for pressing on wheel cranks.

Mattresses. — Sealed proposals will be received until April 30 for building and placing mattresses loaded with stone at Plaquemine, La. Address James B. Quinn, U. S. A., 349 Carondelet street, New Orleans, La.

Mattresses and Springs. — J. B. Carter, Rusk, Texas, wants prices on copper-wire spring, Nos. 8 to 16, and prices on outfit for making mattresses.

Mining Machinery. — M. E. Thornton, Hickory, N. C., will want gold-mining machinery soon.

Mining Machinery. — J. E. H., Box 9, Waynesville, N. C., wants prices on mining screens, machinery, etc.

Mining Machinery. — The Culvert Coal & Clay Co., Culvert, Texas, will probably be in the market in about ninety days for machinery.

Oil-mill Supplies. — Steizner & Diffey, Galveston, Texas, wants to buy press cloth for oil mills.

Paving Brick. — Sealed proposals will be received until April 13, at Wheeling, W. Va., for furnishing 200,000 or more of the best vitrified paving brick. Address W. H. Hornish, clerk.

Paving Bricks. — Sealed proposals will be opened April 13 for furnishing the city of Savannah, Ga., with 30,000 square yards of vitrified paving bricks or blocks. For further particulars address Harry Willink, commissioner.

Pulleys. — The Columbus Iron Works Co., Columbus, Ga., wants information as to the best paper for making friction pulleys; also the best style of tool in use for turning same.

Pumps. — Sealed proposals will be opened April 14 for the construction of drainage pumps for New Orleans, La., drainage system as per specifications. Address Charles R. Kennedy, comptroller, for particulars.

Railway Equipment. — The Cumberland Construction Co., C. P. Perin, general manager, Birmingham, Ala., wants ties, spikes and bolts.

Railway Equipment. — The Baltimore & Southern Railroad Co. intends to buy in the future six engines, twelve passenger cars, thirty box and gondola freight cars, sixteen freight and passenger stations, platforms, rails, fishplates, etc.; Frank R. Bledler, president, Baltimore, Md.

Railway Equipment. — The South Georgia Railroad Co., Heartpine, Ga., will want to buy rails; J. W. Oglesby, president.

Reservoir. — Bids will be opened April 10 for the erection of a reservoir to hold 1,000,000 gallons. Address N. L. Carney, mayor, Clarksville, Tenn.

Rim-bending Machine. — J. 667, Sun Office, Baltimore, Md., wants to buy a rim-bending machine, cheap for cash.

Showcase Hardware. — W. W. Wainwright, Palestine, Texas, wants prices on showcase hardware.

Tannery Equipment. — O. H. Weling, 309 Broadway, New York city, has orders in hand for equipment for a tannery at Laredo, Texas.

Well-boring. — The Flint River & Export Co., Bainbridge, Ga., wants bids for boring an artesian well.

Woodworking Machinery. — Hester & Abernethy, Shannon, Miss., want one wagon-rim bender or fellow bender, one rip saw for fellos from one to three inches thick; one cut-off saw, handle machinery, etc.; second-hand machinery will be considered.

Woodworking Machinery. — Harry Wadham, Braidentown, Fla., wants a veneer-cutting machine (rotary).

Woodworking Machinery. — D. P. Averitt, Statesboro, Ga., wants estimates on woodworking machinery.

TRADE NOTES.

The Davis & Egan Machine Tool Co., of Cincinnati, Ohio, has received a large order from Monterey, Mexico.

Contract has been closed by the Campbell & Zell Co., Baltimore, with the York Water Co., York, Pa., for a battery of 400 horse-power Zell improved water-tube safety boilers for the company's pumping station at York.

"It begins to look like the hard times are a thing of the past," is the cheering reflection made by the Adams & Price Locomotive and Machine Works, Nashville, Tenn. With this establishment, at least, the opinion is substantiated by a rush of orders. It has booked work several months ahead. — Ma-

chinery for snuff mills, casting and structural iron work contracts are keeping this concern busy.

The Chicago Belting Co. has under construction what will be, it is said, when finished the largest belt in the world. It is being made for the Louisiana Electric Light Plant, of New Orleans, and will be 150 feet long, eighty-four inches wide, three-ply, and weighs one and one-half tons.

Favorable comment is made by a number of ministers on the advantages of the Buffalo fan system for heating and ventilating churches. Heating such buildings evenly at a minimum cost, and keeping the air without disagreeable drafts of cold air, are advantages which congregations appreciate. Success has also attended the introduction of this system in school buildings. The Buffalo Forge Co., Buffalo, N. Y., installs this system.

Messrs. A. K. Robins & Co., of 724 East Pratt street, Baltimore, Md., make a specialty of plants for packing fruit and vegetables. They have recently issued a very valuable circular, giving description and prices of these outfits, also of pickling machinery, etc. The circular should be read by all fruit and vegetable growers and by those who are interested in preserving. This concern gives especial attention to the making of small packing outfits, costing from \$100 or so upwards.

Natural asphalt roofing is a product which retains almost indefinitely the essentials of a good roof. It has proved its utility by the results of years, and it is not an experiment. Under severe conditions, such as exposure to sulphuric acid fumes, it has given long and satisfactory service. In the South its application is advantageous, as it does not dry up or brittle from the effects of the weather. This roofing is being used for a number of large buildings. The Warren Chemical & Manufacturing Co., 81 Fulton street, New York, lately covered the Ice Palace Skating Rink, in that city, with this roofing. The same company also put in the water-proof tank in which the ice is made. This work was done with its Crescent brand of felt and ice-tank composition.

Some misunderstanding relative to a recent accident at Ball's Fruit Jar Factory, Muncie, Ind., has appeared. An investigation made by the Christy Fire Clay Co., St. Louis, Mo., which furnished all the blocks used in constructing the tanks in the factory, showed that the accident was unimportant and of no significance. Mr. E. B. Ball sent the following letter to the Christy Company: "You have no doubt read the sensational articles in the newspapers about our tank bursting, etc. Knowing that such articles sometimes reflect on the manufacturers in your line, we wish to say that the break was no fault of the material whatever. The break occurred in the nose of our No. 4 tank. The blocks were furnished by your company two years ago, this being the second year's run. Even now the blocks are in good condition. The break consisted only of one 12-inch stone being pushed out of the wall by the glass, at a point where we take out and put in ring stones."

Experiments in progress for some time to perfect a joint packing that would fill all requirements have been brought to a satisfactory conclusion by Jenkins Bros., 71 John street, New York city. This firm is the originator of unvulcanized joint packing, and adheres to a policy of manufacturing high grade goods. "Jenkins 96" is the name of the new product. Prominent engineers and steam fitters warmly endorse this packing. While the good qualities of the old Jenkins packing have not been changed, added efficiency has been secured. The improvement consists in manufacturing a packing, suitable for any and all pressures of steam, that will not, it is claimed, rot, burn, blow or squeeze out under any conditions. Furthermore, the manufacturers state that they have obtained result which they believe no other packing manufacturers have yet obtained, that is, a packing with all these advantages that will last for years in a joint. In fact, they say it will last as long as the metal itself, and can be broken and used again and again. "We are very well aware," say the Messrs. Jenkins, "that this is a broad statement to make; nevertheless, we stake our reputation upon it."

Modern methods of treating valuable ores are making mineral properties valuable which heretofore could not be worked. The Gold & Silver Extraction Co., Denver, Colo., is introducing a system which is attracting general attention. Recently this company secured an important court decision relative to its system. The Mercur Gold Mining & Milling Co. was sued in the U. S. District

Court of Utah for infringement. In conformity with the decree secured by the Gold & Silver Extraction Co., the Mercur Company has paid to it \$20,000 and taken out a license to use its process, involving regular monthly royalty payments. The order of the court shows that the infringement consisted in using in the treatment of ores in their mines and mills the improvements in the process of obtaining gold and silver from ores which are described and claimed in letters patent No. 403,202, and also conjointly patented improvements in metallurgical filters, which are described and claimed in the claims of letters patent No. 418,138, by using substantial processes of separating precious metal from ore substantially in subjecting the powdered ore to the action of a cyanide solution, containing cyanogen substantially in the proportion not exceeding eight parts of cyanogen to 1000 parts of water, as described and claimed in letters patent No. 403,202, and also conjointly with the use of said process; further, using metallurgical filters containing the improvements and inventions described in letters patent No. 418,138.

TRADE LITERATURE.

The Fort Scott Hydraulic Cement Co., Fort Scott, Kans., has issued a calendar showing views of its plant, where the well-known Fort Scott "Star" brand of cement is made.

R. P. McCormick & Co., contracting engineers, Kansas City, Mo., have published a calendar which illustrates the inlet tower and tunnel of the St. Louis water-works extension, constructed by this firm.

Only a summer shower, but, nevertheless, when it is distributed by a garden hose, good service is wanted. A catalogue issued by the New York Belting & Packing Co., New York city, shows the features of its product for this work.

Cotton and rubber garden hose is described in a new catalogue issued by the Boston Belting Co., Boston, Mass. A number of improvements have been made in this class of hose. The catalogue also shows improved nozzles and hose attachments.

A pamphlet showing what has been accomplished by the Ohio well-drilling machine has been issued by Loomis & Nyman, Tiffin, Ohio, the manufacturers. The testimony of users is presented, and makes a highly creditable showing for this machine.

A calendar issued by the Cleveland & Buffalo Transit Co. gives an excellent picture of the magnificent steamer "City of Buffalo." The view shows the steamer leaving Cleveland harbor on the daily schedule of the company between Buffalo, Cleveland and Toledo.

Automatic siphons for intermittent flush tanks are illustrated and described in a catalogue issued by the Flush Tank Co., 173 Lake street, Chicago, Ill. The successful operation of small pipe sewers is dependent upon flush tanks. The devices shown by this catalogue are approved by engineers and experts.

Launch and stationary vapor engines are described in a catalogue issued by the American Motor Co., Havemeyer Building, Chicago, Ill. There is a constantly growing demand for economical, reliable and efficient kerosene or vapor motors of small dimensions. It is the aim of the American Motor Co. to supply this demand.

The class of apparatus built at the Lafayette Engineering and Electric Works, Lafayette, Ind., is of a superior type. A critical inspection of the products and methods of manufacture shows that all the essentials are combined to develop the highest efficiency. Examples of some of its products are shown in a catalogue lately issued.

A second edition of "Contractors' Methods" has been issued by the Lidgerwood Manufacturing Co., New York city. This pamphlet shows the methods employed on the Chicago drainage canal. As this project is of gigantic proportions, the means employed in carrying it forward were planned on an advanced scale, and probably show better than any other enterprise a correct idea of American methods.

When valves are being discussed, prominence is given to the Ashton patents. These cover broadly many valuable and desirable improvements made in recent years in pop safety valves. Distinguished honors won by these products at various expositions show the recognition given by experts. These valves have been on the market over twenty years, and are not new to steam users. A pamphlet describing their mechanical points

is issued by the Ashton Valve Co., Boston, Mass.

Brown Bros. Manufacturing Co., Jackson and Clinton streets, Chicago, has just issued a booklet on the Gadey air grate. This grate has been in use for the past two years, and has taken an important place among inventions for the economical generation of steam. The booklet is tastefully illustrated, showing clearly the different features in the construction and use of the grate, and contains letters from prominent firms who have used the grate and speak of it in the highest terms.

Something about the materials and workmanship of Westinghouse engines is given in a little pamphlet issued by the Westinghouse Machine Co., Pittsburg, Pa. The quality of the materials entering into the construction of a steam engine is too important a matter to be taken solely on faith, and the mere physical appearance is apt to be misleading. Methods used to test the material entering into the construction of the Westinghouse engine, as well as interesting details regarding the unique system of inspection in operation in the company's shops, are given by the pamphlet.

An improved line of engine lathes is described in a catalogue issued by the Lodge & Shipley Machine Tool Co., Cincinnati, Ohio. Features of these lathes render them capable of a larger volume of work in less time than the old-style lathes. As shown by the catalogue, valuable new ideas are embodied in the construction of these lathes. Important changes in the head, tailstock, carriage and other features are made, and are shown in detail. Turret lathes, 60-inch pulley and crank disc-turning and boring machines, radial drills, back-gearued power-feed drills, bicycle hub and screw machines, etc., of improved types are also illustrated.

Valuable patents granted to Thomas J. Cookson, Chicago, Ill., have been secured by the Bates Machine Co., of Joliet, Ill. They cover the manufacture of the Cookson combination feed-water heater, purifier, filter and oil separator, and a similar combination with a condensation receiver. Features of these devices, which are being introduced by the Bates Company, are highly commended by engineers and steam users as giving advantages in efficiency and economy. An illustrated pamphlet issued on the subject gives detailed descriptions of these machines, showing the important points of difference and the effectiveness of these heaters.

The perfection attained in the production of milling machines by the Cincinnati Milling Machine Co., Cincinnati, Ohio, has given its products an enviable reputation. It has been the company's aim to build high class machines. Years of experience, confined to one specialty, have, as a matter of course, achieved unusual results. Some of the latest types of this company's product, as shown in folders which it has issued, are marvels of completeness. Opinions of representative concerns employing these machines are published in pamphlet form. The publication is almost a selected directory of leading manufacturers, so well are the influential establishments represented. What they have to say is of interest to users of milling machines.

Operators of cotton compresses and those investigating this industry will find some useful data in a pamphlet issued by William W. Bierce, New Orleans, La. It shows some remarkable records for density in compressing cotton made by the Bierce hydraulic press. Among them is the loading of the ship *Stalwart* with 6650 bales of cotton, weighing 3,401,443 pounds, last February. The same ship was loaded at New Orleans last year, and carried then only 4354 bales, weighing 2,184,946 pounds. Much interesting information is given concerning the various records established. As the question of density of compression figures conspicuously in ocean rates, the opportunities for great savings pointed out by this pamphlet will be read with interest.

A catalogue of interest to the trade and steam users generally has been issued by the Battle Creek Steam Pump Co., Battle Creek, Mich. It describes and illustrates the Marsh steam pump. The information is intelligently arranged, and shows clearly the various features and styles of this well-known pump. Boiler-feed pumps of different types are shown. A feature of the Marsh pump is the live-steam actuating and governing valve. With the largest measure of self-government, the highest development of utility and efficiency is possible. This contrivance is designed to meet such exacting conditions. Marine pumps, automatic pumping outlets, vacuum pumps, pressure

engines, pumps for heavy liquids, air compressors, naphtha pumps, etc., are displayed.

Modern methods for mining and handling coal, minerals, etc., are illustrated in catalogue 20, issued by the Link Belt Machinery Co., Philadelphia, Pa. Electric coal-mining machinery is shown. Such equipment has been reduced to a thoroughly practical basis, and accurate estimates may be made of the advantages resulting from its use. The practical operation of machine plants shows the economy of mechanical mining. It concentrates the workings in the mine and reduces the expense from dead work. Entries are driven and rooms turned more cheaply than by hand mining, and power is at hand for drilling, hauling, hoisting, pumping, ventilating and lighting. Various electrical machines are shown by this catalogue, as well as elevating and conveying machinery, storage plants, etc.

The application of labor-saving machinery to the handling of freight, factory products, coal, ore, etc., affords important opportunities for economical work. Wherever anything is to be handled, the utility of conveying machinery can be readily seen. Some idea of the extent to which this equipment is used is given by a special catalogue of the Jeffrey labor-saving appliances, issued by the Jeffrey Manufacturing Co., Columbus, Ohio. The adaptability of the Jeffrey machinery is almost unlimited. Where rapid work is required, such equipment accomplishes results that would often be impracticable with a large force of hand labor. The catalogue shows a system of elevating and conveying machinery for handling coal from railroad cars to storage sheds and from there to various departments; endless carriers for handling freight and packages, conveying machinery for tanneries, barrel and cask elevators, ore-crushing, elevating, screening and storage plants, log conveyors, etc.

Dismal Swamp Canal Work.

Mr. P. McManus, contractor for the improvement of the Dismal Swamp canal, writes as follows to the Manufacturers' Record:

"I am making arrangements to do all the work myself, and do not think at the present time it will be necessary for me to sublet any portion of the work."

Mr. McManus's address is 1430 South Penn Square, Philadelphia.

American Anvils.

The extent of the anvil trade in this country and the method of manufacture are probably not generally known.

Previous to 1891 the wrought-iron anvils used here were imported from England, Germany and Sweden. For the ten years preceding 1892 the average importation per year was \$30 tons. The highest record was 959 tons, in 1888. Several attempts to manufacture anvils in this country are on record, but the real birth of this industry, now so firmly established, dates from 1891. Its growth in 1892 and a part of 1893 was rapid. In 1894 the importations were only 380 tons, and in 1895 estimated at 500 tons, while the consumption for each of these years averaged about 800 tons. This shows a satisfactory progress for the American manufacturers. It is judged that the consumption for the present year will reach at least 800 tons, and it is believed that 600 tons of this amount will be produced at home.

We have been speaking of wrought anvils only. It must be remembered that cast-iron anvils with steel faces have been successfully manufactured in this country for many years. Their quality is excellent, and they answer well for many purposes.

Formerly wrought-iron anvils were built up of six pieces, welded to a central core—four corner-pieces, the heel-piece and the horn-piece. These six parts were welded to the core, and the whole then hammered and shaped. The steel face was then welded on and tempered and ground. This method was generally pursued in the manufacture of foreign anvils, but more recently improvements have

been adopted by some, so that a less number of pieces enter into their construction.

American manufacturers have discarded old-world methods entirely. The S. D. Kimball Co., of Chicago, which is the manufacturer of the anvil known as the "U. S." is able, with improved furnaces for heating the blooms, ponderous steam hammers for forging, steel dies for shaping the heel and horn, new processes for tempering and grinding, novel appliances for swinging the anvil, as required in the course of construction, to produce a superior article. The anvil is rightly named "U. S." for the capital invested, the materials used and the labor employed are wholly American. In the manufacture of the "U. S." anvil, the material is selected and piled to form a bloom or mass sufficient in size to produce the entire upper half, including the heel and horn, and a separate one to form the entire lower half. These piles are run into a furnace, and when heated to a proper degree, become blooms, which are brought under a steam hammer and each shaped and punched and then welded in the centre. Next the steel face is welded on (only special American crucible cast steel is used), and the anvil is swung to another hammer for the finishing strokes. Then follows the tempering of the face by a process originating in this plant, which insures the most even and perfect results, with a great saving of time in handling. After this is the testing, inspection, labelling and bagging, and a warranted anvil is ready for the market.

It is a pleasure to note the establishment of new industries in our country; the success of one leads to others, and thus adds to the general prosperity.

Deer Park, on the Crest of the Alleghanies.

To those contemplating a trip to the mountains in search of health or pleasure, Deer Park, on the crest of the Alleghany Mountains, 3000 feet above the sea level, offers such varied attractions as a delightful atmosphere during both day and night, pure water, smooth, winding roads through the mountains and valleys, and the most picturesque scenery in the Alleghany range. The hotel is equipped with all adjuncts conducive to the entertainment, pleasure and comfort of its guests.

There are also a number of furnished cottages with facilities for housekeeping.

The houses and grounds are supplied with absolutely pure water, piped from the celebrated "Boiling Spring," and are lighted with electricity. Deer Park is on the main line of the Baltimore & Ohio Railroad, and has the advantages of its splendid Vestibuled Limited Express trains between the East and West. Season excursion tickets, good for return passage until October 31, will be placed on sale at greatly reduced rates at all principal ticket offices throughout the country.

The season at Deer Park commences June 22, 1890.

For full information as to rates, rooms, etc., address George D. DeShield, Manager, Deer Park, Garrett county, Md.

Saturday and Sunday Excursions to Washington, D. C., via the Pennsylvania Railroad.

The Pennsylvania Railroad announces that on the following Saturdays and Sundays, excursion tickets will be sold to Washington and return, good until the following Monday, inclusive, at the rate of \$1.25 for the round trip from Baltimore:

	Good going	Good re-
	Saturdays.	Sundays.
April	11	12
April	25	26
May	9	10
May	23	24
June	6	7
June	20	21
July	4	5
		13
		27
		11
		25
		8
		22
		6

These excursions have become very popular, owing to the greatly reduced rate at which the tickets are sold and to the opportunities afforded for attending to business and remaining over Sunday at the Capital.

Fast trains and the high standard of the service always to be found on the Pennsylvania Railroad make the trip a pleasure for the short time consumed en transit between Baltimore and Washington.

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A book on rope transmission is being prepared by the H. Channon Co., 24-26 Market street, Chicago, Ill. It has been compiled with care by an expert in this line, and contains many points on driving power by means of rope, which will be of special value. Engineers and others interested in rope transmission may receive a copy of the book as soon as issued upon sending their name and address to the H. Channon Co.

Steam Yachts and Marine Machinery

Built by Marine Iron Works, Clybourn and Southport avenues, Chicago. Free illustrated catalogue. Write them for it.

One Night's Ride.

Passengers ticketed over the Missouri Pacific Railway between St. Louis and Kansas City enjoy an elegant night's sleep in Pullman buffet sleeping cars. The prevailing features are smooth rails, excellent accommodations and low rates. Inquire of any ticket agent of the company for full particulars and tickets, the prices of which are within the reach of all.

[April 10, 1896.]

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TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., April 3, 1896.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 1st day of May, 1896, and opened immediately thereafter, for all the labor and materials required for the interior finish of the U. S. Courthouse, Postoffice, and Custom-House at Sioux City, Iowa, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Sioux City, Iowa. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid should it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Interior Finish of the U. S. Courthouse, Postoffice and Custom-House at Sioux City, Iowa," and addressed to WM. MARTIN AIKEN, Supervising Architect.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., April 4, 1896.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 30th day of April, 1896, and opened immediately thereafter, for all the labor and materials and fixing in place complete the low pressure, return circulation, steam heating and ventilating apparatus required for the U. S. Postoffice building at Davenport, Iowa, in accordance with the drawings and specification, copies of which may be had at this office or the office of the Superintendent at Davenport, Iowa. Each bid must be accompanied by a certified check for a sum not less than 2 per cent. of the amount of the proposal. The right is reserved to reject any or all bids and to waive any defect or informality in any bid, should it be deemed in the interest of the Government to do so. All proposals received after the time stated will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposal for the Low Pressure, Return Circulation, Steam Heating and Ventilating Apparatus for the U. S. Postoffice Building at Davenport, Iowa," and addressed to WM. MARTIN AIKEN, Supervising Architect.

**PROPOSALS FOR SUPPLIES FOR THE
POSTOFFICE DEPARTMENT AND
POSTAL SERVICE.**

POSTOFFICE DEPARTMENT,

WASHINGTON, D. C., April 4, 1896.

Sealed proposals will be received at this Department until Thursday, May 7, 1896, at 2 o'clock P. M., for furnishing wrapping paper, wrapping paper for facing slips, twine, letter scales, post-marking and rating stamps, rubber stamps, cancelling ink, pads, paper, rubber goods, pens, penholders, pencils, inks, mucilage, glass goods, rulers, folders, articles of steel, rubber erasers, books, typewriter supplies, and miscellaneous stationery, in such quantities of the different articles respectively, and at such times and from time to time, as they may be ordered, during the fiscal year beginning July 1, 1896, and ending June 30, 1897, for the use of any branch of the departmental or postal service.

Blanks for proposals, with specifications giving detailed statements of the requirements to be met in respect to each article, and also the estimated quantities probably to be required of each, and giving full instructions as to the manner of bidding and conditions to be observed by bidders, will be furnished on application to the Superintendent of the Division of Postoffice Supplies, Postoffice Department, Washington, D. C.

The Postmaster-General reserves the right to reject any or all bids, to waive technical defects and to accept any part of any bid and reject the other part.

WM. L. WILSON, Postmaster-General.

PROPOSALS FOR INDIAN SUPPLIES AND TRANSPORTATION.—Department of the Interior, Office of Indian Affairs, Washington, D. C., April 1, 1896.—Sealed proposals indorsed: "Proposals for Beef bids for beef must be submitted in separate envelopes, Flour or Transportation, etc.," as the case may be, and directed to the Commissioner of Indian Affairs, No. 1241 State street, Chicago, Ill., will be received until one o'clock P. M. of Tuesday, April 28, 1896, for furnishing for the Indian service Beef, Flour, Bacon and other articles of subsistence; also for agricultural implements, wagons, harness, hardware, medical supplies and a long list of miscellaneous articles, also bids for the transportation of such of the articles, goods and supplies as may not be contracted for to be delivered at the agencies. Sealed proposals, indorsed "Proposals for Coffee, Sugar, Clothing, School Books, etc.," as the case may be, and directed to the Commissioner of Indian Affairs, Nos. 77-79 Wooster Street, New York City, will be received until 1 o'clock P. M. of Tuesday, May 19, 1896, for furnishing for the Indian service Coffee, Sugar, Tea, Rice, Beans, Baking Powder, Soap, Groceries, Blankets, Woolen and Cotton Goods, Clothing, Notions, Hats and Caps, Boots and Shoes, Crockery and School Books. Bids must be made out on government blanks. Schedules giving all necessary information for bidders will be furnished upon application to the Indian Office in Washington; No. 77-79 Wooster street, New York City, or No. 1241 State street, Chicago, Illinois; The Commissioner of Subsistence, U. S. A., at Cheyenne, Leavenworth, Omaha, St. Louis, and St. Paul; the Plumbers at Sioux City, Yankton, Arkansas.

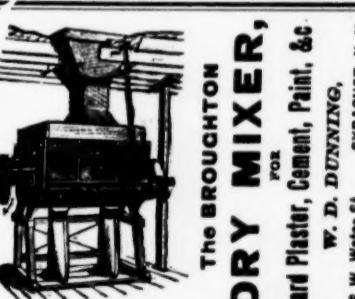
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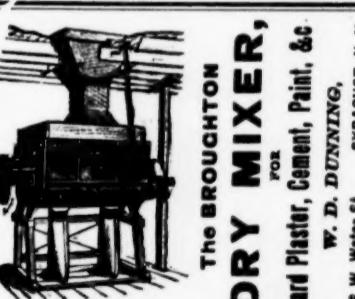
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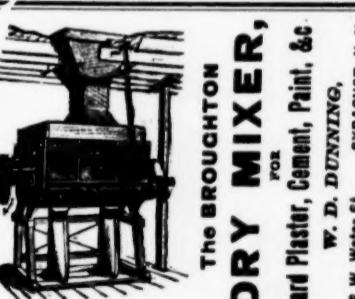
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